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THE GENESEE FARMER:

Issued the first of each month, at Rochester, N. Y., by

D. D. T. MOORE, PROPRIETOR.

DANIEL LEE, EDITOR.

P. BARRY, Conductor of the Horticultural Department.

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Delay of this Number—Explanation.

The publication of this number of the Farmer has been unavoidably delayed until the middle of the month, in consequence of the impossibility of procuring suitable paper at an earlier period. The dam of the Paper Mill in this city was swept away by the freshet in March—yet we were promised a supply of paper the first of April. But we were again disappointed,—and finally obliged to send abroad in order to obtain paper of a proper size and quality, and then wait (until our patience and patriotism nearly evaporated,) for it to be manufactured, &c. Every possible effort was made to prevent the delay, but the elements proved decidedly unpropitious and inflexible.

"This is the head and front of our offending," and we trust our friends will not censure us for a delay which could not be avoided.

TO CLUBS.—Any Post Master or other person who has sent us eight or more subscribers, will be furnished with any additional number of copies at the club price—37½ cents each. We hope our friends will bear this in mind, and forward the subscriptions of those who want the Farmer.

We occasionally send specimen numbers of the Farmer to Post Masters and others who are not subscribers. Will those who thus receive it, introduce the paper to the notice of their friends and acquaintances, and obtain and forward subscriptions according to our club terms? We trust that all who like the manner and matter of the Farmer will lend their influence in extending its circulation and usefulness in their respective vicinities.

Lectures on Agricultural Chemistry.

The Editor of this paper will be prepared to deliver lectures on Agricultural Chemistry during the month of April, and perhaps more or less through the season, in various parts of Western New York. In case he shall go out to lecture, (having had the experience of last year to guide him,) he thinks it best to be provided with a Chemical Apparatus, and to spend two weeks in a town, giving 8 or 10 lectures, and instruction in the *practical details* of analyzing soils, the ashes of plants, &c. By this means, fifty or one hundred persons can acquire, with the aid of books, a familiarity with the elements of the science, and the properties of the tests, and reagents used to elicit important facts, which will be of incalculable service in directing aright all their farming operations.

The charge for going and spending two weeks in a town, including the analysis of soils, will be $50. If fifty or one hundred farmers think favorably of this matter, they have only to subscribe fifty cents or a dollar each, and they, and their sons and daughters, can have an opportunity of attending these lectures at no great distance from their own doors.

Provided any lectures abroad, after the first of May, shall interfere with his duties to his school, none will be given.

Proceedings of the Clinton County Agricultural Society for 1845.—We have received from Willets Keese, Esq., a copy of the proceedings of the Clinton County Agricultural Society, for 1845, with a list of premiums for 1846. We regret that the Society has found it necessary to put the fee of membership at $5, in order to raise the necessary funds to sustain it. This shows a lack of interest on the part of the great mass of farmers, which should not exist.

The crops of wheat and corn on which premiums were awarded were grown at a good profit. Seed corn soaked 12 hours in water, and rolled in plaster. Corn treated to a dose of *ashes* and plaster on the hill.

Canal Tolls on the Products of New York Agriculture.

We were slightly in error when we said in our March number, that the Canal Board had reduced the tolls on corn to 2 mills per 1000 lbs. per mile. The toll is to be 3 mills instead of 2. As the farmers have a deep interest in this question of high, low, and discriminating tolls, we desire to call their attention to a few facts, which the political and other journals have somehow overlooked.

The man that raises and fattens 10,000 lbs. of cattle, sheep, or swine, in Western New York, and wishes to send them alive to tide water, for a market, in a canal boat, (which, with reasonable tolls, would be the cheapest and best way to reach the city of New York,) must pay into the treasury of the State just *eight times* as much money for the use of the canal, as is exacted of a Wisconsin merchant that sends the same weight of lead an equal distance through the same State improvement. This enormous—this most unjust discrimination against the stock growers of Western New York, particularly those of Chautauque, Cattaraugus, Wyoming, and Allegany counties, operates to prevent the use of the canal for the purpose named; while the Canal Board place it at the service of those engaged in transporting *lead* from Wisconsin and Illinois, *coal* from Ohio and Pennsylvania, *tobacco* and *hemp* from Kentucky, and *cotton* from Tennessee. We do not complain that the tolls are so reduced as to invite the transit of the articles named through the canal. But we do contend that, while the Canal Board is so liberal to the inhabitants of the West and South, it has no moral right to impose on our own citizens *prohibitory* tolls, on all fat-cattle, hogs, and sheep; on oats, hay, hemlock lumber, and many other articles too numerous to mention. The toll on potatoes is twice as high per 1000 lbs. as on lead. On a ton of pressed hay, the Canal Board exacts four times as much money as it does on a ton of lead. On a ton of *oats* the toll is four times as heavy as it is on a ton of hemp, or tobacco. On pine lumber the toll is 80 per cent. higher than it is on mineral coal, and 240 per cent. higher than on lead.—Erie county could easily send vast quantities of hemlock lumber to tide water, if its inhabitants were permitted to use the Erie Canal on equal terms, pound for pound, with those that boat lead through it. But, some how a farmer's dollar will only go one-fourth as far in paying toll on a ton of oats, as the manufacturer's dollar in paying toll on a ton of hemp; or the merchant's in paying toll on a like amount of that prime article of *human food*—tobacco!

If the State now realized any considerable revenue from high tolls on pressed hay, oats, fat cattle, &c., the loss of toll might be urged as a reason why no farther reduction should be made. But as the rate is *strictly* prohibitory, and prevents the receipt of any revenue worth naming, there can be no loss from a reduction, no matter how much. It is not the fear of loss in tolls that keeps them up.

We urge this matter the more at this time, because fresh meats packed in ice will soon be shipped from New York and Boston direct to England, and be admitted duty free. Our partially exhausted wheat fields greatly need the renovating aid of more stock and manure. Independently of this, however, we are free to state our firm opposition to a policy that depopulates Western New York, by saying to its industrious young men, "go west and dig lead out of the earth, and not stay in New York and dig oats from her soil; and as a bounty to induce you to emigrate, twelve and a half cents shall go as far in paying toll on the Erie canal on a ton of Wisconsin lead, as a dollar will go to pay toll on a ton of New York oats." This policy must be abandoned. How much more are 100 lbs. of oats *worth* at tide water, than 100 lbs. of lead, that the toll should be eight times higher on the former than on the latter?

The commercial men engaged in the coal, lead, salt, cotton, hemp, and tobacco trade, look well after their interests; but who looks after the interests of the 50,000 farmers in Western New York, when the Canal Board is in session?—Which, among all the political papers, keeps a watchful eye over everything that is likely to affect injuriously the farmer's great, and useful calling? If no one does this, then is it not highly important to the numerous tillers of the earth that, they sustain a Journal wholly devoted to their prosperity, above the reach of party politics, and yet so cheap that its light, and truth may visit every log house in the land? How are we to have an enlightened public opinion, to control all State officers, and legislation? Or should the agricultural public have *no opinion* in regard to the rate of tolls imposed on the weighty, and cheap articles, which this same hard working Public desires to send to a distant market?

If our present readers could be persuaded to lend us their assistance, so far as to place the Farmer in the hands of one-third of the heads of families engaged in agricultural pursuits, in this State, west of Syracuse, Public Opinion would soon so modify the canal tolls as, practically, to place the soil of Western New York 100 miles nearer than it now is, to tide water. Instead of losing our industrious young men, and diminishing our rural population, we should then double our present numbers, and the substantial value of our farms. Be that as it may, it is our duty to press upon the attention of our readers this point: that it is alike impolitic and unjust to compel the people of Western New York to emigrate to Tennessee, Kentucky, Ohio, or Illinois, after they have paid for the old Erie canal, before the Canal Board will permit them to use

it, on equal terms as to rates of toll, with the persons now growing cotton, hemp, and tobacco, or taking coal and lead from the earth, in those States. If there be any good reason why a fat ox raised in Western or Central New York, that weighs 2000 lbs., should be taxed in toll on the canal, 8 mills per mile, while 2000 lbs. of lead going in the same boat, by chance, is charged only 1 mill per mile, we should like to see it on paper. If money is the object, then reduce the tolls on fat cattle, sheep, and swine, down to 1 mill per 1000 lbs. per mile, or at a rate only *twice* as large as that on lead. By this means thousands of fat animals will pay a revenue to the State, that otherwise would not contribute one cent to its income. This reasoning applies as well to the stock growers of Chenango, Madison, Tompkins, Chemung, Steuben, Yates, Oswego, and Lewis counties, as to those residing in counties through which the Erie canal passes. It would not be difficult to demonstrate that the utility of our canals may be increased 50 per cent., with an increase of revenue to the State, by so adjusting the tolls that all weighty agricultural products, including lumber and timber, can reach tide water through these artificial water courses. Take the extreme point west, and 60 bushels of oats, weighing a ton, can be sent from Buffalo to New York for $2,40; or at 4 cents a bushel, exclusive of tolls. At the rates fixed for 1846, the toll on a bushel of oats, weighing 33 lbs., will be four cents and four mills from Buffalo to Albany. Reduce this to 2 cents per bushel, and the revenue will be increased five-fold on this article of coarse feed.

Oil or Fat in various articles of Food.

According to the elaborate researches of Messrs. Payen, Dumas, and Boussingault, there is of oil, in one hundred parts of

Common Maize,	8.8	Dry Lucern,	3.5
Rice,	0.8	Meadow Hay,	3.8
Oats,	5.5	African Wheat Straw,	3.2
do., an inferior kind,	3.3	French " "	2.2
Rye,	1.8	Oat Straw	5.1
Rye Flour,	3.5	Bean Meal,	2.1
Hard African Wheat,	2.1	Beans,	2.0
Venezuela do.,	2.6	Peas,	2.0
Flour,	2.1	Lentils,	2.5
do.,	1.4	Potatoes,	0.08
Fine Bran,	4.8	Oil Cake,	9.0
Coarse Bran,	5.2	Carrots,	0.17
Dry Clover,	4.0		

It seems incredible that there should be 5.1 per cent. of oil in *oat straw*, and only 2 per cent. in beans and peas. We should much prefer 100 lbs. of peas, to make into pork, to their equivalent, 40 lbs. of oat straw!

Butter.—Practice has proved that 62° is the best temperature for cream at the time of churning. If below this, pour in hot water; if above it, cold, until it is brought to the required point. This point is ascertained of course by a thermometer.

For the Genesee Farmer.

From what Sources do Plants derive their Organized Elements?

"Are nothing more nor less than so much water in a solid form."—Gen. Far. p. 11.

Is this true, in theory or fact? Are the oxygen and hydrogen in wheat or straw in the *state* of water? If so, then are the hydrogen and nitrogen of wheat in the state of *ammonia*, and the carbon and oxygen in the state of carbonic acid or oxide, and the carbon and hydrogen just as much in the state hydro-carburet. Liebig states as the fact that, plants take from the atmosphere their carbon and the *elements of water*, and the elements of water form a part of the food of plants.

But who can believe that 97 per cent., or even 90 per cent., of vegetables is derived from the atmosphere? So long as *manures* produce their accustomed effects, is this possible? This fact of the value of manures has been the grand obstacle to the belief of this notion. Though much carbon may be derived from the atmosphere through the leaves, the whole can not be, so long as the *product of each soil* is "limited by the measure of its own fertilizing ingredients."—The solution given by Mr. Ruffin of this difficulty is self-destructive, viz., "that the force of growth given by the soil, enables the plant to seize upon and appropriate a certain increased but definite proportion of the inexhaustible treasures of the atmosphere." What is this *force of growth* but the strength derived from the manures of the soil; in other words, the plant is nourished and strengthened by the very elements in the soil, which that power thus acquired takes only more abundantly, than it otherwise would do, from the atmosphere. It is not enough to introduce into the soil the earthy ingredients which enter into the most healthful operation of vegetable life, but the carbon and other elements must be combined with them to produce the greatest product. There can be no doubt too, that only a portion of the carbon of the atmosphere enters a plant by its leaves; for, carbonic acid is absorbed by the water in the atmosphere, and comes down with it, as does the ammonia, in rains, snows, &c., and must find its way through the ground by the roots into the vegetable.—Thus Liebig says that, "the roots * * * absorb constantly water and carbonic acid," and it would be very singular if other matter than the earthy ingredients should not enter by the roots with the water and carbonic acid. There is no necessity of pressing the principle beyond its obvious extent. Plants operate as the grand means of preserving the necessary balance of the elements of the atmosphere. They remove a large proportion of the carbonic acid, and return the corresponding proportion of oxygen. They use the elements of water, and by means of water take up the ammonia which is rising into the atmosphere from the decomposition of animal and

vegetable matter. They seize upon the elements in the soils, which form their pabulum or support. The economy is beautiful; the operation is admirable; the result most beneficent to the vegetable and animal kingdoms. C. D.

REMARKS ON THE ABOVE.

Our esteemed correspondent gives to the expression, "water in a solid form," a more limited, and precise definition than we are in the habit of doing, when writing for the unlearned who constitute a large majority of our readers; and as a mark of respect for whom, we aim to avoid as much as possible the use of scientific terms of Greek origin, like the words *oxygen* and *hydrogen*. However water or its elements, in connection with carbon, may be transformed into wood, starch, sugar, oil, gum, and other vegetable substances, we think it not amiss to say that such water is in a "*solid form*," so long as water furnishes about one-half of the solid matter in all plants.

"C. D." asks: "Who can believe that 97 per cent., or even 90 per cent. of vegetables is derived from the atmosphere? So long as manures produce their accustomed effects, is this possible?"

These queries raise the most important question that exists, either in the practice, or the science of rural economy. It is one, to the investigation of which we have bestowed some time, and not a little thought. Although pressed for room in this number of the Farmer, we must take it, so far as shall be necessary to explain our views, in a concise manner, on the great question: "From what sources do plants derive their carbon, oxygen, hydrogen, and nitrogen, or their organised elements?"

If we take 100 lbs. of perfectly dry, unbolted wheat flour, and carefully burn it to ashes, we shall have less than 2½ lbs. of incombustible mineral matter. 97½ lbs. of the flour will have been converted into vapor and gas, and dissipated far and wide through the atmosphere.

Combustion is only one process among many, by which nature transforms all organised substances, whether vegetable or animal, into *air* and *vapor*. Every body knows that, when plants and animals die, they decompose on the face of the earth, and while rotting, give off into the surrounding atmosphere, most offensive effluvia or gases, which, in some sections, like the rich alluvial bottoms at the West, are sufficient to render whole counties quite unhealthy. Do not the droppings—the dung and urine of all animals—fall on the surface of the ground and throw into the air, *naturally*, no inconsiderable portion of their carbonic acid and ammonia? The *carbon* in the carbonic acid expelled from the lungs of each human being on the globe, in three days, will weigh a pound, on a fair average, taking old and young together. This will give *daily* to the atmosphere, from this source alone, some 300,000,000 lbs. of carbon from the daily food of man. The ceaseless respiration of all other animals will discharge into the same immense reservoir, at least ten times as much carbonic acid. Fermentation, however, furnishes infinitely more of the gaseous elements of plants than the respiration of animals. Volcanoes and gaseous fountains discharge a vast amount of carbonic acid and nitrogen derived from the decomposition of organic remains, both vegetable and animal, by heat—these remains being more or less diffused through stratified rocks some thousands of feet in thickness. We will not allude to the quantity of carbonic acid, associated with lime and magnesia in the earth, and liable at all times to be expelled into the air by internal heat, however generated.

Vegetables are the only known agents employed by Providence to purify the air we breathe, by consuming all these noxious gases. In what way do they perform this great service—this wonderful *double favor* for all that *eat*, as well as all that *breathe*? For no animal, not even the lowest in the scale of created beings, can live on the elements of another animal, when disorganised into carbonic acid and ammonia. Plants alone have the power to re-organize the simple elements of water and air into nourishment for animals. How is this done? An immense amount of water is evaporated from the surface of the ocean and the earth, as well as from lakes and rivers. This liquid is endowed by Infinite Wisdom with the power of *seizing* in the atmosphere, and bringing with it down to the earth, *in a harmless form*, all the gases given off by combustion, respiration, fermentation, and the rotting of all vegetable and animal substances.—Rain water, armed with carbonic acid, to aid in dissolving carbonate lime and magnesia, iron and the silicates of potash and soda, together with the phosphates, sulphates, and chlorides of these bases—minerals which plants must have—enters the roots of vegetables and ascends to their leaves. There the blessed light and heat of the sun, in a way unknown, transform carbonic acid, water, and ammonia, into woody fibre, starch, oil, sugar, gum, gluten, albumen, and other vegetable products. The green portion of the stems of plants, as is witnessed in the Cactus family, can also change carbon, ammonia, and the elements of water, into organized tissues. Nor are the roots the only portion of vegetables through which carbonic acid, water, and the gases that water holds in solution, enter. The pores in the leaves of plants not only permit the escape, by evaporation, of large quantities of water, taken up by their roots, but they at times imbibe moisture and carbonic acid directly from the atmosphere. What portion of the food of any given plant taken from the air, enters it through its leaves, and what by its roots, is a question of no practical importance. It is, however, a question of the highest moment to ascertain how much of the substance of the soil is really consumed in producing 40 bushels of wheat on an acre. It is all important to learn, if we can, what portion of such a crop is made up of ingredients taken from Nature's grand store-house of vegetable food—the Atmosphere.

After a long course of investigation, extending through many years, which would fill a volume if fully written out, we venture the opinion that, in forming 2,000 lbs. of seed wheat, nature does not use more than 200 lbs. (10 per cent.) of solid matter, taken from the substance of the earth. Over 40 bushels of wheat have been grown in Scotland on an acre of land that had only one-half of one per cent. of organic matter in the surface soil. But we will not argue this point from facts, however unquestioned, collected from extreme cases. We are willing to concede that, a fair wheat soil should have five per cent. of organic matter, capable, on decomposition, of yielding carbon and nitrogen to wheat plants. We will go farther and admit that, this organic matter is, on an average, twice as soluble as the mineral ingredients that go to make wheat. Now, take 100 lbs. of this soil and pour over it rain water which has been boiled, till you have dissolved out 100 drachms of earthy matter. Fix the carbonic acid and ammonia as you expel them from the solution by heat, and weigh them. Evaporate to dryness the salts and organic matter not volatilised, which the water has dissolved. Dry thoroughly at 250° F.—weigh, and then burn in a platina crucible. Weigh the residuum. If the loss by combustion, and the weight of the carbonic acid and ammonia expelled by heating the solution after the soil was washed or leached, make 10 per cent., then your soil will come up to an average of good wheat land, to wit, it will yield to rain water nine parts of the salts of lime, magnesia, potash, and silica, &c., to one of the organic elements of wheat.

Let us now suppose that a wheat field has a fair supply in due proportions, of all the mineral elements necessary to make 2000 lbs. of seed on each acre; and that it has five per cent. of vegetable mold, which is twice as soluble as the other portion of the soil. And here let us suggest that, if the solid organic elements on the surface of the earth were very soluble, like snow and salt, they would all dissolve in a single season, and leave the soil without a particle of organized matter. There is great wisdom displayed by the Contriver of all things, in rendering vegetable mold so *insoluble*. With five per cent. in the soil, and that twice as rapidly consumed by decomposition as the mineral elements, who does not see that vegetable mold will be much sooner exhausted, than any other resource for supplying cultivated plants with food?

Let us now suppose that nature is about to form 2000 lbs. of wheat, whose 1952 lbs. of carbon, hydrogen, oxygen, and nitrogen, or their carbon and nitrogen alone, are to come from vegetable mold. We have shown that, to get 10 lbs. from that source *exclusively*, the plants must take up into their circulating vessels, in the same water or sap, 90 lbs. of earthy ingredients! To convey to the embryo seeds of wheat 1000 lbs. of carbon, drawn from the solid substance of the soil, more than 10,000 lbs. of dissolved minerals must go up to the same destination, although in forming the kernels of wheat nature can use only 48 pounds of these minerals! Striking as are these statements, the truth of which can not be gainsayed, they are only one horn, and that the smaller one, of the dilemma, upon which many men of learning and science have fallen.

Take 100 pounds of a good wheat soil having 5 per cent. of common vegetable mold, and we ask, how much *organ-*

ized nitrogen does it contain to form gluten in wheat?—Dissolve any way you please, the five pounds of carbon, oxygen, hydrogen, and nitrogen it contains, and then tell us how many pounds of good wheat your nitrogen will supply. This is a very important question, because the value of wheat for making bread is measured by the amount of nitrogen it contains in gluten and albumen. We will answer the question. Provided your vegetable mold is as rich in nitrogen as wheat straw dissolved into compost, it will take 6½ lbs. of the organic matter in the soil, to form one pound of wheat.* Hence it is demonstrated that, throwing the ammonia and nitrogen out of the account, nature must decompose organic matter, and take up through the circulation of wheat plants, five times more carbon than she needs to form kernels of wheat, to obtain what nitrogen is necessary to perfect the seeds of this plant! Can anything be more unlikely?

At best, the natural supply of available nitrogen to form 40 bushels of wheat on an acre is *deficient*. Hence, ammonia—a compound formed by the union of 14 parts of nitrogen with 3 of hydrogen—is an essential ingredient in the 10 per cent. of a wheat crop, which should be applied to the soil—allowing as we do 90 per cent. to come from water and air.

In our last number we stated that, an acre of good clover often has 3693 lbs. of carbon, oxygen, hydrogen, and nitrogen, organized in a solid form, after all the moisture is expelled. It frequently happens that 100 lbs. of gypsum adds 2000 lbs. to the carbon, oxygen, &c., organized in a crop of clover. From whence comes this immense gain of carbon, if not from the atmosphere? 100 lbs. of guano have added 5000 lbs, to a crop of potatoes. Does any body believe that, this manure decomposes several thousand pounds of additional vegetable matter, in the soil, to form these 5000 lbs. of potatoes? From some experiments which we have tried, we have reason to believe that you may weigh 100 lbs. of dry soil, moisten it with rain water, and grow in the same 25 lbs. of potatoes more than your seed, and on drying the soil again, it will not have lost but one pound. We have often weighed carefully 500 grains of soil, planted it with wheat or corn, and then weighed the crop when well dried as well as the soil in which it grew; but we have not chosen to publish the results till we can repeat the experiments with the advantage of a very delicate and accurate balance, for weighing every element.

We see millions of acres of prairie grass annually consumed by fire, and all its combustible elements scattered by the four winds of heaven, year after year, for centuries in succession. Is the soil exhausted by the operation that sends from it countless tons of carbon and nitrogen into the atmosphere? Not at all. It is most admirably fitted to bear, by the *ashes* which have been left behind, prodigious crops of wheat and corn. So soon as said *ashes* shall be washed out of the surface soil, or removed in hay and grain, down will go their crops to the old Virginia average. If a man sells nothing but air and water off his farm, no matter in what shape they go, showers and winds will soon fill the vacancy. But when he sells in bones and ashes, whether in wheat, corn, or hay, all the minerals that nature uses to form his crops, let him know that, his children will have to leave "the old homestead," or give twice as much toil for a loaf of wheat bread as they ought to give.

We shall be the last to undervalue the use of manure.—All we contend for is, that the fertilizing elements in a dead horse, which escape into the air, fall some where to make grass and milk, by chance to feed a living colt. As the water that evaporates in one state may fall in another, so the prairie grass burnt in Illinois, with a strong west wind, may fertilize the meadow of a farmer in Ohio—falling of course in dew or rain. But remember that, neither the bones of a dead horse, nor the ashes of plants go with their gaseous elements.

With 59 counties in the State of New York, and Monroe far from being the largest, produces one-tenth of all the wheat grown in the State. This county has no more carbon or nitrogen in its soil than Chenango county, nor has it greater means for making barn-yard manure. Why, then, do the people of Chenango import most of their flour, while those of Monroe export some 200,000 bbls.? It is only because the soil of Chenango lacks some of the mineral elements, found in the seeds of this bread-bearing plant, which exist in the soil of this region. It is owing to her phosphates of lime and magnesia, her chloride of sodium, and sulphate of potash in an available form, that Monroe county shows by the recent census an aggregate yield of grain of all kinds, worth $600,000 more than the product of any other county in the State. The quality of a soil must be judged by its mineral constituents, rather than by the amount of *muck or mold* it may happen to possess. Where the former are *right*, as in the recent lavas of Etna and Vesuvius, with proper seeds, the dews, rains, snows, and winds of heaven will soon bring carbon and nitrogen enough to cover the nakedness of the land. When we say that, in forming 1000 lbs. of wheat, nature takes 900 pounds on an average, from water and air, and 100 from the substance of the soil, of which 24 are minerals and 76 organic elements, we probably credit the soil with more carbon and nitrogen than it really furnishes. Nor can we see how this view of the subject discredits the value of manure, which gives both saline and gaseous elements directly to the roots of plants.—If carbonic acid in rains and dews will aid in dissolving the carbonate of lime, so also will the same gas as it is set free from dung rotting in the earth. If the nitrogen that escapes in the perspiration of a horse will aid in making oats and clover for him to eat, so also will the nitrogen in his other excretions if applied near the roots of plants. It by no means follows that, because our Maker is as bountiful as he is merciful, therefore we should abuse his bounty, as we do his mercy.

* See Boussingault, p. 349.

Constitution for an Ag. Society.

Mr. G. W. Barr, of Western Pennsylvania, requests us to publish a Constitution for an Agricultural Society. We give below the Constitution of the Madison Co. (N. Y.) Agricultural Society, which is perhaps as good as any we could furnish in the space it occupies. There is a spirit of inquiry and improvement manifested by the farmers of Western Pennsylvania, which cannot fail of proving highly beneficial. We wish them God-speed in their endeavors to "improve the soil and the mind."

Article 1. This Society shall be called the "Madison County Agricultural Society," for the advancement of Agriculture, Horticulture, and the Domestic Arts.

Article 2. Any person may become a member of this Society by paying into its Treasury one dollar, on admission, and one dollar annually thereafter, during his continuance as a member. Any person paying ten dollars, on admission may become a life member.

Article 3. The officers of this Society shall be a President, three Vice-Presidents, Corresponding Secretary, Recording Secretary, Treasurer, and fourteen Managers, (one from each town,) who shall, together, constitute the Executive Committee. They shall be elected annualy by a majority of votes present, and shall have power to fill vacancies in their own body.

Article 4. It shall be the duty of the President to preside at all meetings of the Society and of the Executive Committee, and to call special meetings of the Executive Committee when deemed necessary.

Article 5. The Executive Committee shall appoint Local Committees in the several towns of the County, whose duty it shall be to examine farms and crops, which may be offered for premiums; to obtain members, collect fees, and perform all necessary labors connected with the operations of the Society, in their respective towns.

Article 6. It shall be the duty of the Executive Committee, (five of whom shall constitute a quorum,) to exercise a general supervision of the affairs of the Society; to appropriate the funds of the same, in such manner as shall best subserve the interests and forward the objects of the Society; to offer premiums, and to appoint Committees to award them, and to distribute all seeds, plants, books, &c., received for the Society, and to make their annual report at the annual meeting.

Article 7. The Executive Committee shall determine the time and place, and make the necessary preparations for an Annual Fair, and give sufficient previous notice of the premiums to be awarded thereat.

Article 8. All competitors for premiums must be members of the Society.

Article 9. This Constitution may be altered at any annual meeting, by a vote of two-thirds of the members present.

Nitre in old Ash Heaps.

Mr. Editor—The question has been disputed whether nitre will accumulate in wood ashes, under any circumstances, unless in contact with decaying animal and vegetable matter. It is known to boilers of potash, and others that have observed the finishing process termed "melting," that a very inflamable gas is given off that is often troublesome to the workmen, and imputed by them to the effect of nitre existing in the ashes before lixiviation. The advocates of the affirmative refer to the accumulation of nitre in the Mammoth Cave in Kentucky, and other similar places, in confirmation of their opinion.—Those who maintain the opposite opinion contend, (excepting the electric agency,) that nitric acid is formed *only* during the decay of animal and vegetable matter, by the union of the nitrogen of the decaying mass with the oxygen of the air superinduced by the presence of an alkali, as it is supposed to take place in the artificial nitre beds.

If some one of your scientific correspondents will decide this question, and explain the phenomenon alluded to, attending the "melting" process, through the Genesee Farmer, it will subserve the cause to which its columns are devoted. Farmer C.

P. S. I would add, by way of explanation, that the question was started by the inquiry whether the refuse ashes of an ashery that had lain in a very large pile a number of years, had improved their qualities for agricultural purposes, by generating nitre. C.

Remarks.—*Nitrification* is a chemical phenomenon which, at best, is involved in no little obscurity. It is known that much more nitrogen is obtained in the *nitrates* formed in artificial nitre beds, than is furnished by the decaying organised matter. This can only be accounted for by admitting that nitrification, like *oxydization*, is a kind of combustion, where nitrogen, after nitrification has commenced, is drawn directly from the atmosphere to keep up the chemical action, just as oxygen is drawn from the atmosphere to keep up combustion after the chemical combination of carbon and oxygen has once started. If this explanation be the true one, as we think it is, the fact that, nitrogen can be taken from the air, and, in connection with oxygen, combined with lime, potash, and soda, in a well constructed compost heap, is a matter of great practical importance.

Whether a heap of leached ashes will, or will not form a kind of artificial nitre bed, for the accumulation of nitre, will depend on the quantity of organic matter each heap may possess. It is barely possible that, the presence of nitrogenous substances undergoing decomposition, is not necessary to begin the formation of the nitrate of potash, in an old ash heap. But we know of no direct experiments which demonstrate such to be the case. There is, however, more or less carbonaceous matter in all ashes, and doubtless some nitrogen. It is questionable whether this organic matter is in a condition to aid in forming nitre. Rain water falling during thunder storms on heaps of old ashes, and perhaps at other times, brings with it not only ammonia, but nitrous or nitric acid, which, like the ammonia that rises from manure in stables, and aids in forming nitrates on plastered walls, may produce nitrate of potash in ash heaps. These nitrates, however, are very soluble, and most of them will doubtless be washed out, just as the soluble potash is leached from freshly burned ashes.

Every farmer should place his leached ashes, after making soap, under cover in compost with fermenting manure — leaving an open space through the centre of the heap for the air to pass through as in a proper nitre bed. A sound discretion must be used in applying water to moisten the mass. By this process, if we can credit the results said to be attained in artificial nitre beds, the nitrogen of the atmosphere may be transformed into a most valuable fertiliser of the soil.

The gas given off from melting potash which deflagrates (flashes like powder) is oxygen, which is not itself combustible, but a supporter of combustion. This gas is highly concentrated in nitrates of potash and soda, which in conjunction with intensely heated carbonaceous matter, being set free, an explosive combustion or deflagration takes place.

Analysis of the Mineral Elements in Wheat.

The following analysis of the ash of wheat is given by Dr. Will, a gentleman that possesses a high European reputation as an analyst.—We have confidence in its correctness.

100 parts contain

Potash from	22 to 34	parts,
Soda	16	"
Lime	2 to 3	"
Magnesia	9 to 13	"
Peroxide of iron	1	"
Phosphoric acid	49	"

Dr. Will gives 2 per cent. more phosphoric acid than M. Boussingault. The latter found as the average of his analyses 47 per cent. of phosphoric acid in the ash of seed wheat.

There is an egregious *blunder* or *error* in the table of Prof. Johnston's Agricultural Chemistry, where the author professes to quote the analysis of Dr. Sprengel of the ash of wheat. The amount of phosphoric acid is given by Prof. J., both in the London and American edition, at only *one tenth* of the sum stated by Dr. Sprengel. There are other errors in the table equally inexcusable, which we shall take an early opportunity to point out—not having room in this number to go into the discussion of the subject on its merits.

Oats.

Oats are undoubtedly *far richer* in nitrogenous or muscular matter, in proportion to the weight, than wheat. A comparison, according to the analysis of Prof. Johnston, shows this.

One hundred pounds each of fine wheaten flour and shelled or hulled oats contain

	Wheat.	*Oats.*
Muscular matter,	10 lbs.	18 lbs.
Fat,	3 "	6 "
Starch,	50 "	65 "
	63 lbs.	89 lbs.

Albany Cultivator for March.

Remarks.—We do not doubt that the editor of the Cultivator quotes the above figures correctly from Prof. Johnston, but there is a sad mistake *somewhere*. If 100 lbs. of "fine wheaten flour" contain but 63 pounds of starch, gluten (muscular matter,) and fat, all told, what shall we call the other *thirty-seven pounds of something*, in 100 lbs. of dry flour? Will the editor of the Cultivator explain?

In vol. I., p. 170 of Johnston's Agricultural Chemistry, after describing the process of separating gluten from wheat flour, the author says: "The flour of other grain also yields it [gluten] by similar treatment, though generally in a *much smaller* quantity. This appears from the following table. The grain of

Wheat contains	8 to 35	per cent.	of gluten.
Rye	"	9 to 13	"	"
Barley	"	3 to 6	"	"
Oats	"	2 to 5	"	"

How *wheat*, as is well known, can yield from 8 to 35 lbs. of gluten in 100, and *oats* only from 2 to 5 lbs., and yet oat meal contain 80 per cent. more gluten than wheat flour, passes our comprehension. Indeed, the statement is an absurdity. That a pound of oat flour or meal contains 100 per cent. more of the elements of "*fat*" than "fine wheaten flour," is an averment which no practical man will credit. Nor will he credit the other statement, that oat flour has 33 per cent. more starch in it than wheat flour. If oat meal will yield 18 lbs. of "muscular matter" where the same weight of wheat flour will give but 10 lbs., 6 lbs. of "fat" where an equal amount of wheat flour will give but 3 lbs., and 65 lbs. of starch to 50 lbs. from wheat flour, then a bushel of oats is worth at least a bushel and a half of wheat!

Ashes.—At a late Agricultural meeting at the State House in Boston, Mr. Stanley said that he had tried ashes every way. One season he put ashes in the hill in one part of the field, when planted, and on the remainder of the field, applied it soon after the corn came up. Where it was put in the hill, the corn ripened about ten days sooner than the other, and produced at the rate of about ten bushels more per acre. The next year, a part of a row was missed in applying ashes. The result was, that three times the quantity was raised where the ashes was applied.

A few Practical Hints on Growing Corn.

By spreading long unfermented manure over a piece of poor meadow or pasture land, which now yields but little grass, one may raise a large crop of corn, by turning under the manure, and harrowing the sod thoroughly before planting.—The harrow should pass lengthwise with the furrows. The rows should run north and south, that the sun during the day may shine on both sides of them. Ashes should be scattered over the hills after planting. The after culture may be in the usual way, taking care to cut up the corn at the roots before the crop is fully ripe, and secure the stalks in the best manner for winter fodder.—The latter will be worth more than the hay or grass, had the field not been broken up.

Soaking seed corn in a weak solution of common salt and epsom salts is thought to be more advantageous than steeping it either in sal. ammoniac or salt petre, in solution.

We intend to apply a compound of wood ashes, plaster, lime, and common salt, to a large portion of our cornfield this spring, in just the proportions, as near as may be, that potash, soda, chlorine, lime, sulphur, and phosphorus are needed by nature to form the crop.

Soaking Seed Corn.

Mr. Editor:—I wish to inquire what is the benefit of soaking seed corn in salt petre, and how much it requires to the bushel, and what will prevent the worms from injuring it soon after it comes up? Yours in haste,

Brighton, Ohio. A. Kingsbury.

Remarks.—We have in another article in this this number suggested that, a solution of chloride of sodium and sulphate of magnesia (common salt and epsom salts) is better to soak corn in, than either salt petre or sal. ammoniac. The opinion is founded on the fact that kernels of corn need both the chlorine and soda in the common salt and the sulphur and magnesia in the epsom salt; and also on the results of some experiments with the several kinds of brine. The time of soaking or "steeping," as it is called, and the quantity of each salt to be used, are points as yet not so well settled as they should be. We advise every one to try a few kernels many days before planting. The point to be attained is this: Make the solution as strong as practicable and not injure the germ in the seed. In Scotland seeds are steeped from 12 to 48 hours, and some times longer. Four ounces each of the salts named, dissolved in water enough to wet or cover a bushel of corn, have been used with good effect. An equal weight of salt petre, or sal ammoniac, if preferred, can be used in the same way.

Unleached ashes applied on the hill around the corn plants will probably serve to keep off worms and insects.

ANATOMY AND PHYSIOLOGY, designed for Schools and Families, by Calvin Cutter, M. D. Second Edition, with 200 Engravings. Publisher, Benjamin B. Mussey, Boston.

The author of this book has been very successful in divesting his subject of everything that can offend the most sensitive reader, either in the school room or family circle; and yet, by the assistance of numerous engravings, he has contrived to illustrate and describe all the more important organs of the "human form divine," and the office of each organ, in a manner alike interesting, clear, and intelligible.

All females, in particular, should read this little work, that they may see as in a mirror, how easy it is to compress their ribs and lungs by tight lacing, and thus destroy the natural and healthy action of the heart, and respiratory organs, vitiate the blood, banish the glow of health from the cheek, induce constitutional weakness to end in protracted pain, and premature death.

There is a copious Glossary, explaining the meaning of all technical terms, as well as a valuable Index, giving appropriate directions for the treatment of bleeding wounds, cases of poisoning, choking, &c., where the danger is iminent before medical aid can be brought to the relief of the sufferer.

For sale by S. Hamilton, No. 6, State-st., Rochester. Price 75 cents.

Mr. H. has also for sale "The Farmer's and Horseman's Guide," &c., &c., being a collection of recipes for preparing and administering medicines to horses, cattle, and sheep, with some account of their diseases and the treatment of the same. Price 25 cents.

TRANSACTIONS OF THE MADISON COUNTY AGRICULURAL SOCIETY, for the years 1842, '43, '44, and '45, together with an Abstract of the Census of 1845, and an Article on the Geology of the County, with a Map.

The above is the title of a very neatly executed pamphlet of 46 pages, sent us by an officer of the Society. We have read these Transactions and the article on the geology of Madison county, with lively interest. It is the first attempt of any Agricultural Society in the State to give a colored geological map of the county, showing the character of the different rocks on which the soil rests, and also how the decomposition of such rocks affects the quality of the soil, and its adaptation to various crops. This is an important step in the right direction. If the farmers of Madison are true to themselves, and mindful of the best interests of their children, they will come up as one man to sustain, and advance the prosperity of their County Agricultural Society. There should be a noble, and generous emulation between the County Societies of the Empire State, to see which shall do most to increase the profits, and elevate the standing of Rural Labor in New York. To accomplish this object, a knowledge of agricultural geology and chemistry is indispensable. Nor can the study of the organic structure of all domestic animals and cultivated plants, and of the function or office performed by each organ be neglected, without sustaining a material loss, as well in the *purse*, as in the *intellect*. We can not too often, nor too earnestly commend the *study* of the unerring laws of Nature, which govern all the results of the varied, and almost continuous toil of the American husbandman.

THE FARMER'S DICTIONARY: a vocabulary of the Technical Terms recently introduced into Agriculture and Horticulture from various Sciences, and also a compendium of Practical Farming; the latter chiefly from the Works of the Rev. W. L. Rham, Loudon, Low, and Youatt, and the most eminent American Authors. Edited by D. P. Gardner, M. D., Honorary Member of Several Agricultural Societies. With numerous Illustrations.—New York: Harper & Brothers, Publishers, 82 Cliff Street. 1846.

We have barely room in this number to acknowledge the receipt of a copy of the above valuable work from Messrs. Sage & Brother, booksellers, corner of Buffalo and State-Sts., Rochester. It is a work of 874 pages, with double columns, and filled with pertinent descriptions of all or nearly all the various operations in practical agriculture, as well as definitions of all terms found in books that treat of the several sciences, which pertain to Rural Economy. It is illustrated with numerous engravings, and in a word, supplies a deficiency in agricultural literature, which its friends will rejoice to find so satisfactorily accomplished. We shall recur to the subject again.

It is also for sale by S. Hamilton, bookseller, Rochester. Price $1,50.

How to prepare Rennet.—A Herkimer County cheese manufacturer gives the following directions in a communication to the editor of the Michigan Farmer:

After having emptied the stomach, (but not washed it,) a stick which will bend, but not break, is inserted to keep it stretched out; it is then filled with salt and hung up to dry, kept in a dry place to prevent its dripping, occasioned by dampness. Those of the previous year make the best cheese. When prepared for use, a rennet is put into a pint of clear water for one night, two quarts of brine having been boiled, skimmed, and become cold, is added to it. Of this liquor, which must bear an egg, and have salt to spare, half a gill will turn to curd five pails of milk, if first rate; but the strength of rennets greatly vary. As the liquor is used up, add salt and water till the strength is exhausted.

Oil Cake should be steeped in hot water and made into a kind of paste before it is fed to any animal. From 25 to 39 lbs. of dry cake are equivalent to 100 of good hay.

For the GeneseeFarmer.

Early Planting of Potatoes.

I have been a good deal troubled with the rot in my potatoes, for several years, and have expended all of my sagacity to discover the cause and cure. I have also read all the speculations on the subject, and they are not a few, embracing every suggestion from *wire worms to witchcraft*, and without any satisfactory result to my mind.

I observed, last fall, that those planted in low ground, or planted too close together, and those that were the most shaded by weeds or tops, were the most affected; while those in the same field, where they extended to higher ground, and were more exposed to the sun and a free circulation of air, were exempt from the disease.

I am quite sure the cause of the disease is in the leaf and stems, whereby the sap is not returned to the root in a perfected and healthy state, which is the cause of the imperfection of the tuber. I have never been able to discover the action of any insect, nor the existence of any mildew or parisitic plant, and the only difference in the diseased plant from the healthy one, is a discoloration of the bark of the vine, and a soft flabby feeling like as if it was wilting. I therefore concluded that the disease originates in the leaf or lungs of the plant, and is generated from some peculiar state of the atmosphere, and of which cholera and endemical diseases in the animal system are analogous.

I propose *early planting* and *early gathering*, as a probable cure for this pestilence, as all early planted and early gathered potatoes, last year, were exempt from this disease. From the 1st to the 15th of May, and previous to corn planting, I would prefer. I do not think the disease is propagated from diseased seed; but it would be well to try both kinds, as it is an item of knowledge important to be known. Wetting and rolling in lime destroys all the fungus plants that affect the vegetable economy, and could do no harm. H. Y.

For the Genesee Farmer.

Flax on Winter-killed Wheat.

Mr. Editor:—It has been stated to me that flax seed, sown on land where winter wheat has been killed out, and well harrowed in, will do well. The harrowing of the land will prove quite a benefit to the wheat that may be alive.—From one-half to three-fourths of a bushel of seed to the acre will be sufficient. The flax can be cut and threshed with the wheat, and easily separated in cleaning, as the flax seed will run through the screen of the mill into the box. No farmer need fear injuring what wheat may have escaped being killed by harrowing it in the spring, as it will prove a decided benefit to the crop. I think rolling after harrowing is useful.

Le Roy, March, 1846. M. N.

For the Genesee Farmer.

Friend Editor:—As this journal is intended to diffuse information to the cultivators of the soil generally, and for the best modes of doing so, I wish through its pages to interrogate some of its experienced friends of agriculture—hoping they will furnish the information for the next number. A piece of light and somewhat sandy soil, having been cropped for several years, what will be the best course to pursue, in order to enrich it for spring crops, and how deep should it be plowed?

On a somewhat low, rough, and rather turfy piece, I wish to make a meadow of timothy grass. What will be the best method to get it in order, the time for sowing, and the quantity of seed per acre? How much land should be planted with corn to produce fodder, for the season, for two cows? Will it pay a farmer to draw his manure seven miles? What would leached ashes do for such land, and to be drawn the above distance?

Learner.

Rochester, 2d mo. 23d, 1846.

Remarks.—Without wishing to prevent by so doing any of our able correspondents or readers from answering the above questions, we will briefly reply to the same.

"A light sandy soil, which has been cropped for several years" and become somewhat exhausted, will, in the absence of barn-yard manure, be more benefitted by a fair dressing of leached ashes mixed with caustic lime, one of the latter to five of the former, than by any other fertilizer of equal cost. The quantity to be applied per acre must depend on the expense of the ashes.—It should be plowed from one to two inches deeper than it was ever before plowed, in order, first, to deepen the mellow soil; and secondly, to bring up to the chemical action of the light and heat of the sun, atmospheric and other meteoric influences, various alkaline and other earthy minerals, which are necessary to the growth of all cultivated plants.

If your low land is wet, by all means drain it before you sow timothy seed. Don't forget that one ton of hay grown on land well drained is worth a ton and a half taken from a wet, cold, sour soil. In the latter case the quantity of nutritive matter is comparatively quite small.

Plant from two to three acres in corn to make the fodder for two cows, so as to be sure and have enough. If you have an excess, make it into compost by adding thereto every particle of the dung and urine of the cows. By so doing you may greatly enrich your land, extend your corn-fields, and soon have large crops of shelled corn gratis, or as profit.

When a farmer and his team have little else to do, it will pay to haul leached ashes and manure seven miles. Let us add that by mixing the ashes and manure together before their application, both will be improved.

Plaster---Wood Ashes.

C. N. BEMENT, of Albany, in his valuable communication in the last Farmer, on "Manures and their application," says—"I had once great faith in the use of gypsum, but after many experiments with it, I became satisfied that it was of no benefit on my soil, and I have therefore abandoned its use altogether." Mr. BEMENT is not singular in his opinion of the value of plaster, as it is generally applied, broad-cast, to the growing crop. I daily hear our best Seneca county farmers observe, that plaster has little or no effect on the crop, except clover; that, even on this, its effect is often imperceptible.

In the first place, we may infer that farmers expect *too much*, from plaster alone; then it may often happen, that the carbonate of lime in the soil, has been made into plaster by the mineral and vegetable alkalies, deposited in the soil by the manure applied to it, or by decomposing clover previously plowed under; besides, plaster being slow to dissolve, one large dose, coarsely ground as it is with us, may suffice for several successive crops.

If farmers were as zealous to procure house ashes, as they are to provide themselves with plaster, methinks they would reap a ten-fold reward. At this time, the soap boilers' pedlars are picking up the best house ashes in this village, at the exchange of 1 lb. of black soap, for more than an imperial bushel, about 4 cents for the large bushel. I know of no article, shame on our farmers to say it, which at this time is sold so very far below its intrinsic value, as our domestic wood ashes.

But there is another office in the economy of manures, in which plaster may be advantageously applied; let every farmer keep it in his stable, and strew it frequently over his barn-yard, in warm dry weather; the escaping ammonia from the dung and urine, will then be converted by it into the sulphate of ammonia, a non volatile salt. When applied to the field with the manure of the yard, the growing crop will disengage and assimilate the ammonia, leaving the plaster again to assume its former character, the sulphate of lime. S. W.

Waterloo, March 14, 1846.

MASSACHUSETTS BECOMING A WHEAT-GROWING STATE.—"In Essex county, 40 bushels of White Flint winter wheat were raised to the acre, the past year, weighing 61 pounds to the bushel, and was sold for seed at $2,50 per bushel, yielding $100 dollars to the acre, less the cost of plowing, &c., and 6 casks of lime (slacked,) which cost $3,37. The land had been mown for several years, was broken up and well harrowed, limed, the grain limed, then sown, and harrowed, and rolled in on the sod. There is no doubt that drought operated unfavorably.—The soil is a rich, dark loam, and a clay pan."

Farmers' Clubs.

AMERICAN INSTITUTE, *March* 10, 1846.

DEAR SIR:—I am highly pleased to see, in your valuable paper, the GENESEE FARMER, the strong recommendations of the foundation of Farmer's Clubs. In my opinion, and in that of our most able members, these Clubs are destined to effect more real good to the country than almost every other kind of associations—and the daily correspondence which we have, convinces us that we are right.

And we intend to persevere in the practical work of interchanging, to the utmost extent, grafts of all the most valuable fruit trees—the most useful seeds of all plants—and to give, with them, such careful descriptions as will insure to him who receives them a certainty of their results.

By persevering in this interchange, we shall, in a few years, cover our fields and gardens with fruit of the most precious sorts. Much may be done, this season, by a simultaneous movement of the Clubs already formed.

If you think with us, take hold of the subject, and make it a prominent topic in your periodical.

I am respectfully yours,
F. B. WAKEMAN.

REMARKS.—The above letter was not intended for publication; but our friend Mr. WAKEMAN will pardon the liberty, as it brings a very important subject, that of improving our fruits, in a plain and practical way, directly before the public. We trust the day is not distant, when every town in the State will have a well organized, working FARMER'S CLUB, for the improvement, not only of fruits, but of all cultivated plants, and domestic animals; and above all, for the improvement of that infinitely higher and nobler being—Man himself.

TO CURE A STIFLED HORSE.—Take one gallon of urine, and put therein a small handful of junk tobacco, boil down to one quart; then add two ounces of the oil of spike, one ounce of the oil of amber, two spoonfuls of spirits of turpentine, and two spoonfuls of honey. Put into a jug, and cork it tight for use.

Process of application.—Rub the stifle bone hard with the mixture fifteen or twenty minutes; then dry it in thoroughly with a red hot fire shovel, then ride the horse forth and back one hundred rods. Repeat the above two or three times, and the cure will be effected.—*Am. Ag.*

TWO FACTS WORTH CONSIDERING.—According to the official returns laid before Parliament, there were imported into the United kingdom of Great Britain in 1840, from all countries, 1,993,405 quarters of wheat. This is the *first* fact.—The second is that, with equal advantages as to duty, the farmers of the United States sent to England in the year named, only 73,755 quarters, or one 25th of the whole.

Growing Clover Seed.---Does it injure the Soil?

Mr. Editor:—In a recent number of the Farmer, "S. W." says—"One of our best Pennsylvania German farmers, who has bought some half a dozen farms with the products of a single farm, *in wheat and clover seed*, complained to me the other day that, in spite of the green crop of clover plowed into his wheat fallows. the wheat heads grow shorter and more shrunken every year."

It would meet a question of some interest to agriculture, if S. W., or his German friend, would inform us what system of cropping he has pursued, for in my experience clover seed is one of the most exhausting crops we can raise on wheat lands. Some years ago, in order, as I thought then, to increase the product of wheat and the profits of my farm, I commenced raising clover seed to alternate with wheat. After continuing the practice for three years, I found that my wheat heads, like those of our German friend, grew shorter and more shrunken every year.—I therefore abandoned raising clover seed, even for my own use, preferring to buy my clover seed of Seneca county farmers to raising it.—I think it is better practice to pasture our clover fields, and to keep all the stock of cattle and sheep our circumstances will permit.

As I understand that the crops of wheat are much lighter in Seneca county than formerly, it is clear there is some defect in the system of farming pursued. Can any of our Seneca friends tell what are the causes of this deterioration in their wheat crop, and if it has any visible connection with the raising of clover seed?

Yours respectfully, W. S.

Wheatland, Feb. 26, 1346.

Woolen Statistics.—From a recent work issued in New York, containing an account of the woolen factories in this country, and other statistics connected with them, it appears there are 28 in Maine, not including small wood-carding works; 58 in New Hampshire, 141 in Massachusetts, 76 in Vermont, 40 in Rhode Island, 123 in Connecticut 226 in New York, 10 in New Jersey, 101 in Pennsylvania, 4 in Delaware, 16 in Maryland, 18 in Virginia, 80 in Ohio, 9 in Kentucky, 6 in Indiana, 6 small in Michigan, 6 in Illinois, 7 in Wisconsin, 3 in Missouri, 2 in Iowa, 4 in North Carolina, 3 in Georgia, and 2 in Tennessee. Total in the Union, 1042.

Massachusetts Industry.—There are seven hundred miles of Railroad in operation in Massachusetts, costing twenty-eight million dollars.

It is a curious and important fact that, the people of Massachusetts annually produce 50 per cent. more property or wealth than any equal population in the United States, according to the most accurate statistical returns. Why is this?

Value of Green Food for Sheep.

M. Perrault found by careful experiment, that 100 lbs. of green lucern fed to sheep would go as far in nourishing the animal, as 158 lbs. of similar food well cured, and then fed. In the latter case, the digestive organs of the sheep do not extract more than two thirds of the flesh and fat forming elements which they take from succulent, green plants. If a good deal of the nutritious matter fed to domestic animals in *dry food* slips through their stomachs, and by the mouths of their lacteal glands, which should convey nourishment from the intestines to the blood vessels, it is obvious that the steeping of all dry food will be of great utility, and good economy. The loss, however, is not wholly to be attributed to defective digestion. In cutting lucern and clover, there is a sensible waste of leaves and other very nutritious portions of these plants.

Potato Rot.—*A Curious Fact.*—In the latter part of the summer of 1844, a farmer of the township of Lincoln, Addison county, Vermont, was quite behind all his neighbors in cutting his grass in his meadows. At night some waggish boys went into one of his meadows and cut down all the grass in it. They also went into his potato patch and cut a few swaths through it. When the time came for digging potatoes, his potatoes were found principally rotted *except where the boys had mowed off the tops.* Those were found to be sound and good.

This experiment would seem to show, that the rot or disease begins in the tops; and suggests, as the means of saving a crop of potatoes, to apply the scythe as soon as the tops begin to die.

The above circumstance was related by a creditable and well informed person, who resides at no great distance from the township of Lincoln.

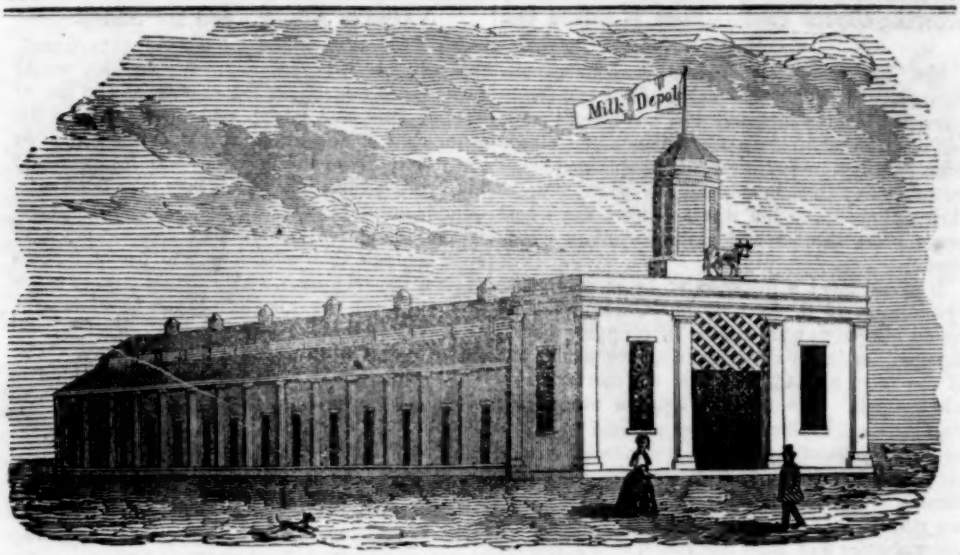
H. G. Canfield.

Canfield, Trumbull co., O.

We clip the above from the Ohio Cultivator as it corroborates certain *facts* indicating that the tops of potatoes are first affected, noticed by us last season, and published in this paper.—Ed.

Potatoes in Maine.—In 1844 the potato crop in Maine was 12,304,000 bushels, only second to that of New York, which was 17,000,000 bushels. New York raised six bushels, and Maine twenty-four bushels, to every person in these respective states. From last year's crop, it is estimated that the loss by rot this year in Maine, cannot be less than $1,230,000, or more than two dollars to every person in the state.

Cutting Food for Sheep.—Mr. Thomas Noble, of Stark Co., Ohio, in a letter to the Ohio Cultivator, says:—"My sheep consist of 1600 head, and so far I have lost *none;* all in fine order, and by close attention we intend to keep them so. We *cut all their feed*, and the saving thereby is at least one third."



Depot of the Rochester City Milk Company.

Office of the Rochester City Milk Co.,
Rochester, March 2, 1846.

Editor Gen. Farmer:—In compliance with your request, I herewith transmit to you, a sketch of the Milking House and Depot, which our Company propose to construct this spring, in this city, immediately on the banks of the Genesee River, near the centre of the town, for the accommodation of *one hundred cows*, and for the sale of milk of the very best quality.

The building is in the shape of a —I. The front of brick, 50 feet in length, and 25 feet in depth, and 20 feet in height, with a rear building 175 feet long, and 32 feet in width—built with a centre hall or arcade, twelve feet wide and twenty feet high, with windows and ventilators in the tops, (as shown in the sketch,) to admit a free circulation of air, in the warm seasons of the year.

On each side of this hall, there is a range of mangers and stanchions for *fifty cows*—with troughs in front of them through which water is to be constantly running.

The floor is to be of clay, paved with flat stone, set *edgewise*, in the rear of the cows, with a gutter one foot in width, immediately behind the cows; and between these gutters and the doors at the sides of the building, there is an alley, *five* feet in width on each side. The doors for the entrance of the cows are three and a half feet wide, seven feet high, and twelve feet apart. Over the cows, between the hall and the sides of the building, there are floors for the reception of the winter fodder of the stock, capable of holding two hundred tons of hay or corn fodder.

The gutters drain into cisterns in the basement, and trap doors in them let the manure down into carts, in which it is drawn daily to the company farms in the vicinity of the city, where the crops are produced to supply the milch cows in the Depot. The teams bring down a load of grass or hay, and carry back in return a load of manure—it being cheaper to transport the feed to cows than to cart the milk, twice a day, from the farms to the city.

The front of the building is occupied for an office, and rooms for the sales of milk, ice-cream, &c., and the attic for the lodging room of the men belonging to the establishment, while the cellar is used for roots, and milk room, and also a part of it for a small steam engine, employed to cut up and *steam the food* for the cattle, pump the water from the river to supply the reservoirs in the building, and to *heat* the stable in winter, by steam.

In the rear of the office are the rooms for the milk-wagons, and sleighs, and adjoining these is the stable for the horses that are used for distributing milk throughout the city.

The whole cost of the building is estimated at $2,500, including the engine, fixtures, &c.

I will, if you desire it, furnish you with a statement of the manner in which the establishment is to be conducted, and the method of keeping the cows, &c., &c.

Truly yours,
C. B. STUART,
General Ag't Rochester City Milk Co.

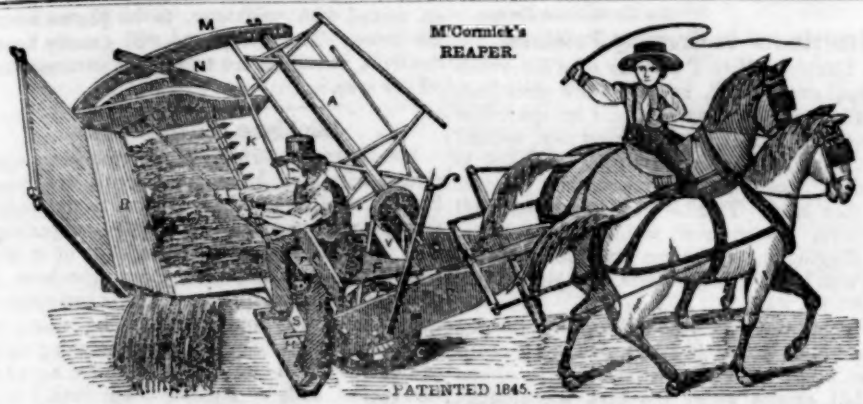
P. S. The Rochester City Milk Company furnishes the citizens of Rochester with pure and wholesome milk, at the following low tariff of prices:

Daily average in 1 month.	From 1st June to 1st October.	From 1st October to 1st June.
36 qts. and over,	3 cents per quart	2½ cents per quart.
12 " under 36,	2½ " "	3 " "
2 " " 12,	2½ " "	3½ " "
1 " " 2,	3 " "	4 " "

To find the *average*, add the quantity taken in *one* month, and divide by the days in the month.

Skilful Wheat Culture.—Mr. Anson Wolcott, of East Bloomfield, has grown an average of 40 bushels of wheat per acre for 3 years, alternately, in succession. The seed was sown after summer crops of corn and potatoes. Mr. W. makes a point of using both unleached and leached ashes, together with a little lime and gypsum.

Bologna Sausages—Louis Philippe.—When teaching French and Dancing at a Boarding School, near Newtown, Bucks County, a friend narrates for the Courier that he conceived the idea of manufacturing Bologna sausages, and accordingly purchased a quantity of beef and ham, and with the assistance of a colored man, made up a lot of the article, packed, and forwarded them to France. This fact was incidentally furnished by an old lady now in the city, who *then* lived in the neighborhood, remarking that she knew how to make good Bologna sausages—and being asked where she obtained the recipe, replied, "from Louis Phillippe."



McCormick's Patent "Virginia Reaper."

McCormick's Reaper.

This machine, an engraving of which is given above, has been considerably improved since its first introduction into Western New York.—From the numerous certificates shown us, we are inclined to believe that the Reaper, as improved, is a truly valuable labor-saving implement.

See advertisement, page 100.

Dr. Lee's Lectures on Agriculture.

At the conclusion of the last Lecture, given at the Court House in Rochester on Monday evening, the 16th of March, the following proceedings were had:

On motion of L. B. Langworthy, the meeting was organized by calling Silas Walker to the chair, and appointing L. Wetherell, Secretary.

Messrs. L. B. Langworthy, Jacob Graves, and L. Adams were, on motion, appointed a committee to draft resolutions expressive of the sense of the meeting.

The committee thereupon presented the subjoined resolutions, which were unanimously adopted:

Resolved, That we have received much valuable information from the course of Lectures on the science of Agricultural Chemistry and Geology, recently delivered by Dr. Lee in this city, and that his illustrations and explanations of the most interesting natural phenomena attending the renovation of soils, the culture of different crops, and the growing and improvement of domestic animals, have been not less plain and practical than able and scientific.

Resolved, That the study of the natural sciences, which have a direct bearing on Agricultural pursuits, by the young men who are to follow such pursuits, can hardly fail of conferring on them great advantages over those that disregard these branches of useful knowledge.

Resolved, That we believe a repetition of these, or the delivery of a similar course of Lectures, in every farming district in Western New York, would prove highly interesting and valuable to all cultivators of the soil, and greatly aid in promoting Agricultural improvements.

Resolved, That the thanks of this meeting be tendered to Dr. Lee for his highly interesting and instructive course of Lectures, just concluded.

On motion, it was voted that the proceedings of the meeting be published in the Genesee Farmer.

SILAS WALKER, *Ch'n.*

L. Wetherell, *Sec'y.*

An Extraordinary Cow.

Mr. John Jones, an extensive farmer in New Castle county, Delaware, in a statement to the Committee on Farms, of his stock of cows, farming operations, &c., describes his cow "Yellow Flower as having given milk about four years, and made an average of one pound and ten ounces of butter each day for that length of time!" He says: Thus you see her lowest milking may be put down at 14 ots. per day.

Greatest milking,	26	" "
Greatest yield of butter,	2½	lbs. "
Lowest,	1½	" "
Average,	2	lbs. 10 oz.

Yellow Flower is an annual calver, and beats Mr. Frost's most famous cow in England, which made on an average 2½ lbs. of butter each day for four years. Yellow Flower is a *native* cow, and will be 10 years old on the 10th of June, 1846. Mr. Jones has eight cows, all natives, which make an average of 48 lbs. of butter per week.

Mr. J. keeps what appears to be accurate farm accounts, and has made a fortune by purchasing some 800 acres of poor land on a long credit at an average of $10 per acre, and then buying 20,000 bushels of lime, also on credit, at over 20 cents a bushel, beside gypsum and clover seed, to renovate the soil. The estate now pays the annual interest of $100 per acre over and above all expenses.

We gather the above interesting facts from the Baltimore American Farmer.

Tea Plant in France.—A letter was read at a late session of the Paris Academy showing the possibility of cultivating the tea plant in France. The writer states that he is able, by his mode of preparing the tea grown in France, to produce as fine qualities as the best imported from China. He has forwarded samples to the Royal Society of Agriculture, so that we soon shall have a report from that body on the subject.

For the Genesee Farmer.

Experiment in Growing Potatoes.

Mr. Editor—*Sir:* I wish to state the result of a small experiment, and ask a few questions. In planting potatoes, last spring, I set apart four short rows of equal length. First row, applied spent tan bark, a common iron shovel full to three hills. Second row, leaches ashes, a shovel full to four hills. Third row, plaster, a handfull to two hills. Fourth row, nothing.

On digging the following was the result:—Those with bark, 75 lbs.; ashes, 67; plaster, 62; with nothing, 61.

The field from which the above rows were taken was full of the white grubs, and many of the potatoes injured. There were some in almost every hill, except where the bark was applied, in which row I found but two. Variety—round Pink-eye, one potato in a hill. Soil—sandy loam.

First question I wish to ask is concerning a matter of every day occurrence. How should corn be measured in the ear? I have seen it done in two ways. Sometimes it is carefully placed in the half-bushel or baket, with the hands; at other times thrown in promiscuously with the scoop-schovel: two bushels of ears for one of shelled. Now, in using a small measure there is manifestly a difference. Equal and exact justice to all men is my motto.

What is a corn barrel, how large is it, and how made?

How may the common black ant be destroyed in an orchard? I have an orchard in which there is a nest of them at the root of every tree. It has alternately been plowed, planted, hoed, sowed, cradled, and mowed, for the last seven or eight years. An answer to the questions, and a notice of the experiment, are solicited in the Farmer. Thomas Wright.

Rush, N. Y., Feb., 1846.

Remarks.—If tan bark will destroy or keep away "grubs" from potatoes and other plants, the *fact* is important. If Mr. Wright will shell a bushel of corn as the article usually is when harvested, and then dry it thoroughly for many weeks, it will skrink about 22 per cent in bulk. Hence, when a man tells the exact truth in regard to the number of bushels of even shelled corn harvested, you must discount one fifth for shrinkage in ordinary cases.

A "barrel," to measure corn in, is equal in size to a common flour barrel. For handling corn in the ear it is used instead of a basket at the South and Southwest, with pieces of ropes tied into the staves for handels. On the Mississippi river, (where the corn trade is immense,) a barrel of ears is shelled and measured accurately, and from that the grain in 1000 barrels, or any other number, is calculated.

We regret that we cannot prescribe a remedy for the ravages of the "black ant." We venture to suggest, however, the free use of leached ashes, mixed with quicklime, to be placed around the trees. This compound will greatly benefit the fruit, as well as the trees, if it does not drive off the ants.

Michigan Subsoil Plow.

Mr. Editor:—Having had three years experience with the Michigan Subsoil or Trench Plow, I feel it my duty to give to the public, through your paper, the result of my experience, and, if possible, show the superiority of its work over all other plows. To those who have not seen the plow I will state, that it is two plows on one beam, one running behind the other, and from three to five inches deeper, bringing up the sub or under soil and laying it on the top of the turf turned under. I plow with it from 7 to 11 inches deep, depending on the nature of the soil—loam and sand requiring the deepest plowing.—When I purchased the plow I supposed I should only plow turf land with it, but now I use no other. I find it equally advantageous in turning under stubble as turf. I plow but once for any crop. Last spring I turned up 20 acres of turf, sowed part to peas and part to barley; took off the crop; and plowed again in August and sowed to wheat. I found my land in a better condition than to have summer fallowed, and I got an increased crop of barley and peas. You may pasture up to the time of sowing or mow, if your land is strong enough to bear it. I have practiced it with better success than with an ordinary summer fallow. Crops stand either a wet or dry season much better than with an ordinary plow. In a wet season it drains the water off more effectually, and much quicker, and the surface soil is not deadened by stagnant water, and giving greater depth of soil in a dry season the roots run deeper, and the plant bears up longer. It covers turf so effectually that the land appears like an old field, and the earth lying over the sod retains all the gasses arising from the decomposition of vegetable matter turned under, while with light plowing much of it passes off in the atmosphere, and is lost. It is a great preventive against June grass, and other obnoxious weeds; it covers them so deep the crop always gets the start of them, and a few times plowing will clean the land.

With spring wheat I have been equally succesful. I plow in the fall, either turf or stubble land, and sow early in the spring, without plowing. I am so well pleased with it that I would not have my land plowed with any other plow, if it could be done for nothing. No farmer would do without one, if he knew what they are. Any person can have a plow by addressing a line to the subscriber, directed to Darien Centre, Genesee Co., N. Y. Alva Jefferson.

Darien, March 19, 1846.

Every farmer should be a permanent subscriber to a good agricultural journal.

For the Genesee Farmer.

Rust, Mildew, and Charcoal.

Mr. Editor:—Though I am not a practical agriculturist or chemist, I take the liberty to suggest to you, or to your readers if you see fit to publish them, a few remarks on Lime, Plaster, and Charcoal as manures—together with rust on wheat, as I consider them intimately connected.

The principal use of quick-lime, when applied as a manure, is to draw the carbon from the organic matter, which will then readily decompose and form food for the growing plant. Plaster, or sulphate of lime, acts in the same way, with the addition that the sulphruric acid leaves the lime and passes over to the alkalies in the organic matter. In proof that this is the principle on which they act, I will bring a few well conceded facts. 1st. That lime or plaster, when applied where there is little or no organic matter, has but little or no effect. 2d. That the larger the amount of organic matter the greater the effect. 3d. That plaster, when sown just before, in a rain, or just after a rain, does but little if any good. The reason of which is, that water absorbs carbon and saturates the lime with it before it has operated on the organic matter. I need not inform *you*, sir, but doubtless many of your readers are not aware that anything saturated with carbon is imperishable, and decomposes only as the carbon is given off. Charcoal is the purest carbon in the vegetable form, with which we are acquainted, and will last for ages if of any size, if acted upon by nature only. The effect of pulverized charcoal is the opposite of lime and plaster, and should be used only when there is a superabundance of organic matter.

Now for the rust—and, to introduce the matter, I will just state the combination of causes that produce it. 1st. A low, sheltered situation. 2d. A soil rich in organic matter, and frequently very rich in alkalies. 3d. About the time the wheat is in the milk, a still atmosphere, small showers, or heavy dews with hot sunshine between. We all agree as to the causes, and must be satisfied as to effect; but in the whys and wherefores we are not so fortunate, hardly two writers agreeing in opinion, which gives me but little courage in setting mine afloat, so many others, and from abler pens, having preceded it—but here it goes, hoping that if I have not hit upon it, it may help some one to progress still farther towards finding out this disideratum.

I consider that the effect of the above causes is, to deprive the plant of a full share of carbon, without which it can not mature any more than we can live without atmospheric air. I think of no better way to explain myself, so as to be understood, than to take each cause and note its particular bad effect. 1st. A low, sheltered situation is peculiarly fitted for a bad circulation of air. 2d. A soil rich in organic matter, &c., gives a superabundance of food to the plant, and of course requires a proportionate amount of carbon to ensure health. 3d. A still atmosphere does not bring carbon from the surrounding country as it would if it were in motion, so the leaves (the leaves are the lungs, and the plant takes in carbon from no other source,) of the plant soon inhale the small quantity of carbon within their reach, made still smaller by being absorbed by the water from the showers and heavy dews.

One word farther in explanation. The juices pass up through the pores by capillary attraction—get charged with carbon through the leaves—pass down between the fibre and cuticle, or bark, (if we may so term it,) and if properly assimilated form another course of fibre, if not the course of nature would be to eject it from the system through small slits in the cuticle, called stomata.

Now if this is the fact, what is the remedy? I answer that the best one with which I am acquainted, is, a judicious use of pulverised charcoal. 1st. To keep the organic matter from decomposition as much as possible, and—2d. to supply the plant with carbonic acid through the air, in a measure, when it is partly absorbed by water and not supplied by wind from the surrounding country. Such is my theory, and I might bring many acknowledged facts in support of it; but will forbear, being a friend of short articles.

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Mr. Editor:—Excuse me for troubling you with a poscript to my yesterday's communication; but I think if what I am about to advance is fact it is high time for the world to know it. It is to extend my theory of rust to the potato disease—and the way it acts is this: The tuber is formed by the sap passing up the fibre of the stalk, and down between the fibre and cuticle into the root, and of course has an opening for it, which plants without tubers have not: and the sap, which otherwise would have formed fibre, if it had a sufficiency of carbon, passes down also, and not belonging there, does this mischief, which there is so much talk about. The remedy is, of course, the same as for wheat. The blight or fire blight in pears, &c., is accounted for in the same way, and, I think, the mildew on peas, &c. Yours,

Pittsford, March, 1846. T. B. H.

Remarks.—The theories of our correspondent are ingenious, but we fear that his explanations of the mysterious workings of Nature, in the matters discussed, will not be satisfactory "to the world." We give place to them in the hope that, the frequent collision of intellect with intellect will ultimately evolve important discoveries for the common benefit of our race.

Our correspondent is in error when he says that "plants take in carbon from no other source beside their leaves." Rain and other water that enters the roots of plants carries with it no small amount of carbon in carbonic acid held in solution. There are other remarks which are open to criticism, but we let them pass.

HORTICULTURAL DEPARTMENT.

BY P. BARRY.

Culture of the Peach.

The Peach is an important fruit in our region. Our soil and climate are highly favorable for its culture, and there is a great and increasing demand, with high prices, for the fruit. We are glad to know that fruit growers are turning their attention to it. By choosing a proper site for orchards, and selecting suitable varieties, Peaches may be grown here with as great success, as any where in the Union.

We have seen, here, and have raised in our own grounds, as large crops (for the age and size of the trees,) and as large and fair specimens of fruit, as we have ever seen in New Jersey or Delaware. The *peach worm* is the chief difficulty we have to oppose, and that is not a serious one—neither does it trouble us to any considerable extent.

The west or north sides of hills are preferable for Peach orchards; there they are less subject to injurious freezing or thawing in winter and spring. They cease growing sooner in the autumn, and consequently ripen their wood better, and the fruit buds are more likely to escape spring frosts. In our vicinity, however, good crops are produced in any situation where the soil is right, and due attention given to culture.

A light, dry, fertile soil is the best, and as the peach exhausts the soil rapidly, though not requiring great richness, it should receive a dressing of compost, manure, ashes, &c., now and again, to keep the trees in a thrifty, growing state.

Trees one year old from the inoculation are the safest and best for transplanting. The Peach grows rapidly, and the fourth year after planting a good crop may be reasonably expected. The proper distance, in orchards, is 20 to 25 feet, or about 100 trees to an acre.

The following are a few of the best varieties we know for general culture, and would make a nice collection.

Sweet Water—a large, beautiful white Peach; a good grower and bearer; ripens early in Aug.

Early Tillotson—a fine early Peach, but the tree is very liable to mildew, which is a great objection to it; early in August.

Crawford's Early—large and fine, one of the best yellow Peaches; middle of August.

Yellow Alberge—a very fine, old variety, well known and greatly esteemed here; a great bearer; middle to end of August.

Royal Kensington—a large and fine peach; first rate; end of August.

Cooledge's Favorite—large size and fine flavor; grows and bears well; September.

Jacques' Rare Ripe—one of the largest and finest Peaches; bears abundantly, and is of first quality; September.

Nagle's Favorite—very fine; Aug. and Sept.

Red Rare Ripe—a standard sort; old and well known.

Crawford's Superb—one of the largest and finest yellow Peaches known; latter part of Sept.

Red Cheek Malacaton—fine old variety; well known.

Snow Peach—first rate; hardy and productive; fruit remarkably delicate and handsome in appearance; September.

White Imperial—Large and delicious; tree is hardy and a vigorous grower; first rate; end of August.

For Clingstones, the *Lemon*, *Orange*, and *Heath* are very fine.

Culture of Esculent Roots.

Rhubarb.—This is a plant that should be cultivated in every kitchen garden. It makes delicious pies and tarts when nothing else can be had for that purpose; we prefer it to gooseberries for our own use. Immense quantities of it are sold in London, and in all our own principal markets. Its valuable properties are fast becoming known. The attention which has recently been given to it, has caused the production of new varieties of gigantic size, single leaf stalks of some of them weighing two pounds.

Myatt's Victoria is the best we have seen of the large kinds. It is of monstrous size, and the flavor is excellent. A correspondent of the "Cultivator" describes the "Leviathan" as having "leaf stalks as long as a walking stick, and leaves as large as an umbrella." That's not bad, we think.

The roots may be obtained at the nurseries and should be planted in a rich, mellow, deep soil. The smaller kinds may be planted in rows three feet apart, and two feet apart in the rows; and for the largest the distance should be nearly doubled.

Sea Kale.—This is a fine kitchen garden plant, that is much neglected. Comparatively few know anything about it. It is fit for early use, and is fully equal to Asparagus, when properly grown and cooked. It may be raised from seed, or the plants can be had in the nurseries, and may be cultivated in any good garden soil. It is best when blanched, like celery; and to do this, pots or boxes are placed over the plants early in the spring, as soon as the ground is thawed, to exclude the light. In this way it shoots up tender and beautiful; when the leaves are three or four inches above ground they are fit for use and may be cut. It is dressed and served up like Asparagus. It is a good plan to cover the roots in the fall, or beginning of winter, with earth, or what is better, rotten manure. It may be blanched in this way, by those who may not have leisure to use pots or boxes, as recommended above.

Asparagus should now be planted. Prepare

the soil well by trenching 18 inches or 2 ft. deep, and abundantly manuring. Procure good two or three year old roots, and they will be fit for cutting the second year after planting.

Where a large plot is to be planted for marketing, the place may be prepared with the plow. A subsoil plow should be used, or an ordinary plow may be run twice in the same furrow.

When the ground is prepared it may be laid out in beds, 4 or 5 feet wide, and the roots planted in rows 1 foot by 1½, and an inch and a half below the surface. For extensive culture, rows 3 feet wide, and plants 18 inches apart, is better, as the ground can be worked with greater facility. The whole matter is as simple as the culture of Indian Corn, and no man who appreciates the value of healthy, nutritious vegetables for his family, will allow this spring to pass without planting, if he has not already done so.

To Correspondents.

PRUNING, &c.

In our last number, we remarked, among other brief hints intended to remind our readers what should be done—not *how* or *why* it should—that "orchards should now be pruned, if not already done, and that no pruning should be done, if it can be avoided, after the sap has commenced flowing;" meaning, *that spring pruning should be completed before the flow of sap commences.*

We have received a communication from "Brockport," on this subject, assuming that we have erred in advising winter or spring pruning, and that mid-summer is the only proper season for pruning. In support of this he quotes the *Genesee Farmer of* 1832, "*Kenrick's Orchardist*," "*Buel's American Farmers' Instructor*," and "*Gaylord and Tucker's Husbandry*,"

He says—"The reasons in favor of summer pruning are, that the wounds heal rapidly, leaving the wound uninjured, while if pruned in winter they dry and crack under the cold winds and never thoroughly grow over; and spring trimming permits the escape and loss of the sap, and, to some extent, induces effects similar to the winter operation."

We are no advocate of severe pruning at any season of the year—particularly in common orchard culture. All that is necessary is to thin out superfluous branches, and regulate the form of the tree. In our region this can be done with safety in the month of February and beginning of March. Reasons in favor of pruning, at this time, are—*First:* the sap which would be expended in sustaining this superfluous wood, will increase the vigor and productiveness of the remaining portions of the tree, and aid in developing and maturing the fruit. *Second:* The farmer has much more leisure in February than he has in mid-summer. We find it diffidult to direct much attention to the orchard during summer. The wounds caused by removing small limbs heal up immediately if pruning is carefully performed, and where large limbs are taken off, which should be done only in cases of absolute necessity, a composition of some kind may be used to exclude the air until the wound closes. Summer pruning should be performed very cautiously. To deprive a tree of a large portion of its wood and leaves while in a growing state, frequently produces a stagnation of the sap, and induces disease. We find, in pruning small trees in the nursery very moderately—only removing a few of the side branches—that it causes a partial relaxation of their energies. Still we practice summer pruning, and indeed pruning at all seasons, more or less, *except in spring when the buds are swelling and the flow of sap commences, and until the leaves are full grown.* If people would attend properly to their trees during the whole season, no pruning would be necessary, that would injure a tree in summer, fall, or winter.

We base our remarks on experience. Those who prefer other methods are at liberty to adopt them. We would suggest, however, that in cases of this kind some *standard authority* in fruit culture should be chosen. As our correspondent has not quoted Downing's work on "Fruit and Fruit Trees," we would beg leave to recommend it to his notice.

As regards the *Virgalieu Pear*, we would inform "Brockport" that the figure and description given in our January number, were taken from a genuine specimen before us, and will be instantly recognized as correct by all who are familiar with that popular and valuable fruit.—Circumstances modify, sometimes materially, the form, flavor, and time of ripening of fruits. That described as not arriving at maturity on the tree, we should say was not the Virgalieu, except the soil is very cold and unfavorable. The other spoken of in Oneida county is more likely to be the *genuine thing.*

Our Nantucket (Mass.) correspondent is referred to an article on the subject of his inquiry, published elsewhere in this department.

Please give us credit.—We find our hints on Garden and Orchard operations for March, copied in the *Troy Budget* of 24th March, credited to the "New York Morning News"! We suspect the "News" has published them as its own, and in doing so has garbled them a little, and thus perverted the sense, which shows it knew nothing about the matter. For instance, in speaking of cutting scions, we said that "two or three buds of the last years growth should be left." The *News* has it, "two or three buds of last years growth should be left on the scions"! We are glad to see our items copied, but we wish it to be done correctly, and due credit given us. Some of our exchanges we find are copying our figures of fruits, without any acknowledgment. Be honest gentlemen, if you please.

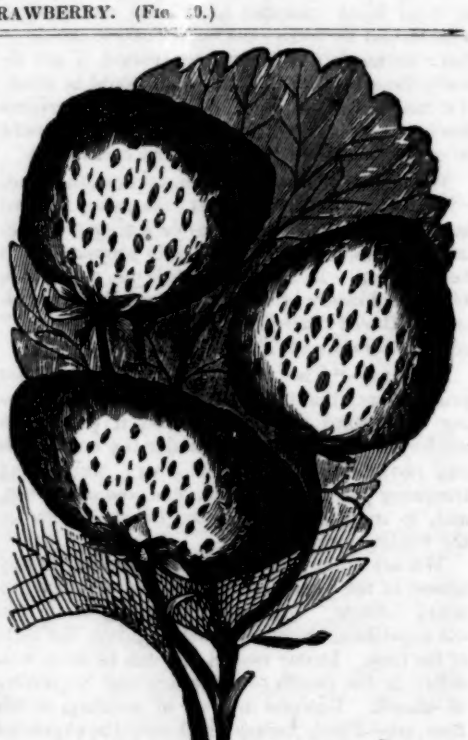
HOVEY'S SEEDLING STRAWBERRY. (Fig. 10.)

Culture of the Strawberry.

It is needless for us to waste our paper in commending the culture of this fruit to the attention of all who are fortunate enough to have a garden, or land enough to make one. Suffice it to say, that no man or woman is worthy a garden who will not appropriate a portion of it to the culture of the Strawberry. It is a most delicious and healthy fruit. The plants are easily procured and easily cultivated. In the August number of our last volume, we gave brief directions for planting and cultivating, and noticed a few choice sorts for small collections.

Lest some one may not have that number to refer to, or anything else better, we will add a brief hint or two now. In the first place, it is decidedly better not to attempt this matter at all, than not to do it properly. We have seen strawberry beds enough, that were complete nuisances in a garden—planted on an unprepared soil—neglected entirely after planting—of an unknown variety, perhaps *unworthy* of culture.—The matter should stand just the reverse of this. The ground should be well prepared, *deep* and *rich*. The plants should be of well selected, esteemed varieties, procured from a well known source.

The plants may be set, where ground is limited, 18 inches apart each way; where there is plenty of land, 18 inches apart in the rows, and 2½ feet between the rows is preferable, as it gives room enough for culture. In all cases the ground should be kept well worked, and clear of weeds, and the runners should be removed as often as necessary. In the fall, say October or early in November, a dressing of well rotted manure should be spaded or forked in between the rows.



ROSS' PHŒNIX. (Fig. 11.)

In cold districts, such as in the counties of Oneida, Herkimer, Otsego, &c., and north of us in Canada, a covering of branches of evergreens, or leaves, should be given, to the depth of two or three inches. After the second or third year's

bearing, the plants may be renewed by allowing young plants, runners, to establish themselves in the spaces between the old ones—having previously prepared the spaces by spading and manuring. After the young plants are well rooted, and when the crop has been all gathered, the old ones may be spaded down to enrich the ground. This is a very simple and very excellent method of renewing the plants—a matter that should not be neglected, as old plants become sterile or produce inferior fruit.

The following are very fine for general culture: Hovey's Seedling, Ross' Phœnix, Keen's Seedling, Large Early Scarlet, Bishop's Orange, Red and White Alpine, and particularly *Stoddard's Seedling Alpine*, which has attracted so much attention for its extraordinary size and productiveness. We give in this number figures of Hovey's Seedling and Ross' Phoenix, both superb kinds. We may add here, in regard to Hovey's Seedling, that the fruit committee of the Massachusetts Horticultural Society has recently awarded a *special premium* to Hovey & Co. of $50 for this variety, and state "*that after a trial of 12 years*, they know of no Strawberry of superior merit, and where it is cultivated near other varieties, it will prove one of the *best*, where all are *good*." There are several new varieties we are now cultivating, which are highly spoken of, but we cannot at present, recommend them for general culture.

Horticultural Society.

Officers of the "Horticultural Society of the Valley of the Genesee," for the current year:

WILLIAM PITKIN, *President.*

L. B. Langworthy,
Isaac Hills,
J. R. Murray,
A. Erickson,
Asa Rowe,
} *Vice Presidents.*

J. W. Bissell, *Treasurer.*
Jas. H. Watts, *Corresponding Secretary.*
J. M. Whitney, *Recording Secretary.*

The Horticultural Society of the Valley of the Genesee, present the following list of premiums for the year 1846:

VEGETABLES.

Asparagus—Earliest and best three bunches,.....$1
Peas—Earliest and best half peck, $2—second best, $1
Cucumbers—Earliest and best pair,..... 2
Rhubarb—Best 12 stalks,..... 1
Potatoes—Earliest and best half peck,..... 1
Tomatoes—Earliest and best six,..... 1
Corn—Earliest and best six ears,..... 1
Celery—Best dozen, $2—second best, $1.
Cauliflower—Best single,..... 1
Lima Beans—Earliest and best half peck,..... 2
Best display of vegetables during season,..... 3

Discretionary premiums will be awarded by the Committee, at their discretion, to the amount of $11.

FRUIT AND MELONS.

Apples—Greatest number of varieties and best grown, $3—best six specimens of summer, $1—best six specimens of fall, $1.
Pears—Greatest number of varieties and best grown, $3—best six specimens of summer, $2—best six specimens of fall, $2.
Cherries—Best three specimens, $2—best 3 varieties, $2
Peaches—Earliest and best six specimens, $3—best three varieties, $3—greatest number of varieties and best grown, $2—best single specimen, $1.
Apricots—Earliest and best six specimens, $2—greatest number of varieties and best grown, $2.
Plums—Earliest and best six specimens, $2—greatest number of varieties and best grown, $2.
Nectarines—Best three specimens,.....$1
Quinces—Greatest number of varieties and best grown,.. 2
Gooseberries—Best flavored three specimens, $1—greatest number of varieties and best grown, $2.
Currants—Greatest number of varieties and best grown, 1
Raspberries do. do. do. 1
Strawberries—Greatest number of varieties and best grown, $3—earliest and best 12 specimens, $2—best 12 specimens, $2.
Grapes—Greatest number of varieties and best grown, $2—best single bunch, $2—second best single bunch, $1.
Watermelons—Best specimen, $2—second best, $1.
Muskmelons—Best specimen, $2—second best, $1.
Best show of assorted fruit at fall exhibition,..... 3

In addition to the above, the Committee will award discretionary premiums, should they think proper, amounting to $13.

FLOWERS.

Hyacinths—Best display,.....$2
Tulips, do. 2
Peonies, do. 3
Pansies, do. 1
Roses, (hardy,) greatest number of var. and best grown,. 3
Do. best six varieties,..... 2
Do. (Bengal,) do. do. 1
Do. (Bourbon,) do. do. 1
Do. (Noisette,) do. do. 1
Carnations and Picotees, best display,..... 2
Do. do. best twelve varieties,..... 1
Do. do. best single bloom,..... 1
Annuals—Best display during season,..... 3
Dahlias—Greatest number of varieties and best grown,.. 4
Do. best twelve varieties,..... 2
Do. best single bloom,..... 1
Do. best Seedling,..... 1
Flowering Shrubs—Best display during season,..... 2
Do. Trees, do. do. 1
Best Floral design, $3—second best, $2.
Best boquet of cut flowers, $2—second best, $1.

GREEN-HOUSE PLANTS.

Best 12 plants, $2—best single specimen, $2.

NATIVE FLOWERS.

Greatest number of varieties,.....$3

In addition, the Committee will award discretionary premiums as above, amounting to $10.

NURSERYMEN'S PREMIUMS.

Best display of green-house plants at fall exhibition,.....$5
Best Floral design,..... 3
Best show of Apples,..... 1
Do. Pears,..... 1
Do. Peaches,..... 1
Do. Plums,..... 1
Do. Cherries,..... 1
Do. Apricots,..... 1
Do. Strawberries,..... 1
Greatest number of varieties of Roses,..... 1

ESSAYS: OPEN TO ALL.

Best Essay on Curculio, with result of experiments and insect in various stages,.....$5
Best Essay on Honey bee moth,..... 5
Do. Peach worm,..... 3

RULES.

No article shall be entered for competition except at general exhibitions, unless the competitor shall have been a member of the society for at least one month.

She Society reserves the right to withhold premiums on inferior specimens, evon though they should be the best exhibited.

Members may enter articles for *exhibition merely* which are not of their own growth or production.

All articles entered for competition shall be labelled with their name and the name of the producer; and no specimen incorrectly named, shall be considered as entitled to any premium.

J. M. WHITNEY, Rec. Sec'y.

Manuring Pinks.—The Gardner's Chronicle says, a friend manured some pinks very freely with rotten rags, and the improvement in the appearance of the bloom was astonishing.

The Horticultural Society of the Valley of the Genesee.

We publish in another place the names of the officers of this Society; also a list of premiums, offered for the present year, 1846.

The objects of this Society will be, to awaken such a spirit of improvement in gardening, throughout the *Genesee Valley*, as will enrich our Gardens and Orchards with the finest fruits of the earth, and embellish every home with trees, shrubs, and plants of ornament. The best gardens in the world, at this day, owe their richest treasures to the influence of Horticultural Societies. Ours, if well managed and well patronised, as we do hope it will be, must prove a great public benefactor. We call on every friend of improvement, in Western New York, more particularly in the *Valley of the Genesee*—every lover of fine fruits and beautiful flowers—all who have an interest in the improvement of the soil, or who wish to see their *own* section of country take its proper rank in the progressive movement of the day, to give prompt assistance in building up and sustaining this Society.

The great landed proprietors should assist freely, if only in view of their individual interests. They, in a particular manner, will be benefited. The Society will aid in developing the superiority of our country for fruit growing and gardening, and thereby enhance its value materially.

We are glad to be able to state, that many wealthy and tasteful citizens of the surrounding country and villages, have expressed their satisfaction at the formation of the society, and promised their hearty co-operation.

THE FRUIT CULTURIST, Adapted to the Climate of the Northern States; Containing Directions for Raising Young Trees in the Nursery, and for the Management of the Orchard and Fruit Garden. By John J. Thomas.

We are indebted to a friend for a copy of this work, which is received just as our paper is going to press. We have glanced hastily over it, and find it exactly what we expected—a plain, practical little book, well calculated to effect the designs of the author, as stated in the preface, viz: "To furnish useful directions to those who may be little acquainted with the management of fruit trees, promote the culture of the best varieties, and improve their treatment so as to secure excellence and productiveness in a more eminent degree than is usually attained."

It is divided into two parts. The first contains "*General directions and practices*," and the second "*On the different kinds of fruits.*" Each part is divided into chapters, in which the various branches of the subject are separately treated, in as plain and concise a manner as possible.—One chapter is devoted to *implements*, illustrated with engravings—and at the end is a "descriptive list of fruits," after the manner of the best nursery catalogues. This is decidedly *the* book for the "ten hundred thousand" fruit growers in the northern states. Every man and woman who cultivates to the number of *one* tree should have it, and have it immediately. It will save an immense deal of trouble in asking questions of persons who are perhaps too busy, or ill qualified, to answer them. To the mullitudes of persons of *all* professions, and of *no* profession, who are here and there embarking in the nursery business, without the least knowledge of the matter, it is invaluable.

We hope it will be placed in every school district library in the State. It is well adapted to promote taste and knowledge amongst the young. We may refer to it again, when we have more space and leisure—and after we have given it a more careful perusal. It can be had of D. M. Dewey, Arcade News Room, Rochester, at the price of 50 cents.

MOUNT HOPE BOTANIC GARDEN AND NURSERIES,
Rochester, N. Y.
(South St. Paul st., nearly opposite the Cemetery.)

The Proprietors of this Establishment offer for sale an unusually large and fine collection of

FRUIT AND ORNAMENTAL TREES,
Flowering Shrubs, Vines and Roses, Hardy Herbaceous Plants, Double Dahlias and Bulbous Roots; Grape Vines, Raspberries, Strawberries, and Gooseberries; Asparagus Roots, Rhubarb, &c.; Hedge Plants, Green House Plants, &c.

The collection of Fruit Trees comprises the most popular varieties cultivated, and has been grown with the greatest possible care to ensure accuracy. The Proprietors are *practical and experienced Nurserymen*, and wholly devoted to the business;—all the important operations are either performed by themselves or under their immediate inspection.

Experience has fully proved that the trees grown at this point, in addition to being free from diseases, are better adapted to cold climates than those of any other portion of the United States.

The collection of Apples includes several thousands of the famous new American Apple, the "*Northern Spy.*"

A large assortment of Pears, of the choicest kinds, are propagated on quince stocks for Dwarfs and Pyramids, and will bear the first or second year after planting; they are admirably adapted for garden culture. A lot of these are now on hand, of extra size, for immediate bearing.

The collection of Ornamental Trees is large and fine, comprising several hundred of the splendid *Paulonia Imperialis*. The catalogue of Roses embraces the most popular new varieties. A great variety are propagated for standard or Tree Roses, 4 to 6 feet high, with fine heads.

Of *Double Dahlias* the assortment is unsurpassed, including the finest show flowers yet introduced to this country, and many that were imported last season at 5 guineas each. A catalogue will be published in April.

The stock of Green House Plants is very extensive, and includes the most beautiful new Pelargonium (Geranium,) Fuchsia, Camellia, Calceolaria, Verbena, Cactus, &c., &c., all finely grown, and will be sold at greatly *reduced prices*.

Trees and Plants packed in the best manner, and shipped to any part of the country agreeable to order.

Priced catalogues sent *gratis* to all *post paid* applications. Orders from unknown correspondents should be accompanied with a remittance or reference.

ELLWANGER & BARRY

Rochester, April, 1846.

Sanford's Straw Cutter.

For sale by Rapalje & Briggs at the *GENESEE SEED STORE*, No. 10 Front St., Rochester. Price $15.

Rochester, April 1846. [4-tf.]

"Burrall's Patent Shell-Wheel Plow."

Saves one-third draft, and works well.

MADE and sold, at Wholesale and Retail, by CURTIS, ROSE & Co., (Geneva, Ontario Co., N. Y.,) manufacturers of Threshing Machines and Separators, Clover Mills, Corn Shelling Separators, (a new and desirable article,) Steam Engines and Boilers, Mill Gearings, Water Wheels, Stoves, Hollow Ware, Potash and Caldron Kettles, &c.

The Wheel Plows and Corn Shellers can also be obtained at the following places:

RAPALJE & BRIGGS, Genesee Seed Store, Rochester.
EDEN FOSTER, Batavia.
HALL, RHOADES & SHERMAN, Syracuse.
PETER CRONKHITE, Hallowell, Canada.
B. F. Davy & Co., Bath, Canada. [4-3t]

American Plow Factory!

[This cut does not properly represent the Plow.]

CODDINGS AMERICAN PLOW.

THE UNIVERSAL TESTIMONY of all who have used this Plow, is, that it is *the* Plow for every farmer to have in his possession. It will draw lighter than any plow now in use to do the same work, thus saving much work for your teams. The following extract from the report of the committee of the *State Agricultural Fair* will show the difference in this respect between this and some of the bett Plows tested.—"Cayuga County 388 pounds draft; Ontario Co., 431 do.; Caledonia, 422 do.; Eagle, (Mass.) 415 do.; Lockline, improved, 403 do.; Iron Beam, 388 do.; Livingston Co., 400 do.; ☞ *Coddings American*, 320 do.!" ☜ *Sixty-eight pounds* lighter draft than the lowest on the ground. With this plow you can turn your furrows *up hill*—give them the *half lap*, completely shutting in the grass so as to prevent its growing. With it you can plow your stony ground, stubble or clover, and "any thing else." They are wooded with first rate seasoned white oak timber, in the very best manner, and warranted to be right in every respect. They are ground and *polished* before leaving the shop, which makes them ready for immediate use.

Call at the Shop and examine the recommendations.—Among others who have used them, we would refer to the Society of *Shakers*, near Mt. Morris. Orders supplied, at *wholesale* and *retail*, to any part of the U. S. or Canada, and a constant supply on hand at the *American Plow Factory*, on Aqueduct st., rear of No. 17 Buffalo st., Rochester, N. Y., by CAPRON & CURTIS.

*** ALSO for sale, in this city, by *Philip W. Cormwell*, Frankfort—*E. Taylor*, Agricultural Warehouse, Hill st.—*Z. C. Colvin*, South St. Paul st.—and *Smith & Gould*, corner of Buffalo and Trowbridge sts. By *John Reynolds*, Pultneyville; *W. J. Stoutenburg*, Williamson; *J. L. Sanford*, Palmyra; *B. Fish*, Sodus Phalax; *C. P. Smith*, Ontario, and country merchants generally.

N. B. *Points* always kept in the vicinity where plows are used. ☞ Wood and Country Produce taken in exchange for Plows. [4-2t]

Peas Wanted.—Wanted, at the Genesee Seed Store, two or three hundred bushels Peas, of the first quality, for which the highest cash price will be paid by
RAPALJE & BRIGGS.
2tf. No. 10, Front-st., Rochester.

Eggs.—The subscriber has for sale a few dozen EGGS from the breed of fowls described by Bement as the "*Ostrich Fowls.*" Price, 37½ cents per dozen.
J. W. BISSELL,
At the Commercial Nursery, Main-St., Rochester.

Agricultural Books.

SAGE & BROTHER, corner of Buffalo and State streets, Rochester, have a large and well selected assortment of the most approved Works on Agriculture, among which are the following:

Johnson's Farmer's Encyclopedia—Downing's Fruits and Fruit Trees of America—Boussingault's Rural Economy—Johnston's Agricultural Chemistry—The American Poulterer's Companion—Stewart's Stable Economy—Youatt on the Horse—Hind's and Mason's Farrieries—Youatt and Clater on Cattle—Morrell's American Shepherd—Blacklock's Treatise on Sheep—Farmers' and Emigrants Hand Book—Kenrick's American Orchardist—Buell's Farmer's Instructor—Gaylord & Tucker's American Husbandry—Armstrong's Agriculture—A Treatise on Vegetable Physiology—Liebeg's Animal and Agricultural Chemistries—Beatty on Agriculture—Falkner's Farmers Treasure—Smith on Productive Farming—Fessenden's Complete Farmer—Child on Beet Sugar—Fessenden's New American Gardener—Johnson's Gardening for the Ladies—Bridgeman's Gardener's Instructor. [4-2t] Rochester, April, 1846.

The newly Imported Horse 'Consternation'

WILL serve mares at $20, the ensuing season, at the stables of C. T. ALBOT, Stoke Post, Oneida county, N. Y.

He is sixteen hands high, very powerful, and has splendid action. He was got by Confederate, dam Curiosity by Figaro. He took the First Premium at the State Fair in September last. [4-2t*]

The Imported Horse Alfred,

WHICH took the first premium at the New York State Agricultural Fair, in 1843, will stand for mares this season, 1846, at the following places, viz:

At WILLIAM GARBUTT's, Wheatland, as follows:—

On Saturday and Monday,		May	2	and	4
"	"	"	16	"	18
"	"	"	30	June	1
"	"	June	13	"	15
"	"	"	27	"	29
"	"	July	11	July	13

At JOHN BAKER's, Macedon, as follows:—

On Saturday and Monday,		May	9	and	11
"	"	"	23	"	25
"	"	June	6	June	8
"	"	"	20	"	22
"	"	July	4	July	6
"	"	"	18	"	20

At the *American Hotel*, in Rochester, on *Wednesdays* and *Thursdays* of every week, to the close of the season, commencing April 29 and 30.

TERMS:—Ten dollars to insure a foal, payable 1st of March, 1847. Persons parting with mares before foaling time will be held responsible for the services of the Horse.
GEORGE FORDON.
March, 1846. JOHN BAKER.

Colman's Agricultural Tour.—Subscribers to the above work are hereby notified that No. 5 is now in the hands of the agent, ready for delivery, and they will please call for them. JAMES H. WATTS, *Agent.*
Rochester, April 1, 1846.

Corn Shellers!—A first rate article, price $10, for sale at No. 10, Front-st. RAPALJE & BRIGGS.

Castor Oil Beans.—Just received, and for sale at the Genesee Seed Store, No. 10 Front-st., by
[4] RAPALJE & BRIGGS.

Rakes—99 dozen I. Stark's superior Hay Rakes, for sale at the Genesee Agricultural Store, No. 10, Front-st., by
[4] RAPALJE & BRIGGS.

Branch Peas.—100 Bushels German Branch Peas, a very superior article, just received and for sale at the Genesee Seed Store. [4] RAPALJE & BRIGGS.

Plows for Sale.—We have on hand, and intend to keep constantly for sale, the celebrated *Diamond* and *Wisconsin* Plows, the merits of which have been fully tested. Price, $7,00 for medium size. The farming community are respectfully invited to give us a call.
RAPALJE & BRIGGS,
2tf. No. 10, Front-st

McCORMICK'S PATENT "VIRGINIA REAPER."

[For Cut of this Machine, see page 91.]

Brockport, March 20, 1846.

The undersigned respectfully offers his PATENT REAPER to the farmers of New York, and the Western States generally; and while he believes that no labor saving machine has ever been introduced into public favor more cautiously, and at the same time with more general satisfaction to purchasers than his Reaper, he has the satisfaction of being able to present it for the harvest of 1846, in a greatly improved state. He can now warrant the raking of the wheat from the machine to be accomplished with ease and completeness, by a man comfortably *seated upon it*, whose position may be seen from the above cut. This improvement was thoroughly tested in the last harvest with the most signal success, and as is believed, perfects the Reaper. An account of its operation on the estate of the late Gen. Mills of Mount Morris, by Samuel J. Mills, Esq., is hereto subjoined.

This Machine, unlike many of the improvements of the present age, is not now offered to the public either as an untried experiment, or only having been partially tested, and therefore not to be relied upon. It has been extensively and most successfully in use in *Virginia*, since the harvest of 1842; and during the last two years has been extensively introduced into most of the wheat growing states of the Union, and in no case has it met with any opposition. So wide has been its range of operations in the last harvest that it would be impossible, in a publication of this description, to give all, or even very many of the numerous certificates that have been procured of its satisfactory performance. Hand Bills will be issued in the course of a few days by Messrs. Backus, Fitch, & Co. of Brockport, Monroe Co., containing not only a description of the Machine, but the most full and unequivocal testimony of its usefulness and value to the farmer, by numerous individuals of the very first respectability who have witnessed its operations. The terms on which this machine may be had, and the guaranty that will be given on its sale, should induce every farmer whose lands and crops suit its operation to *give it a trial*—as, should it prove equal to the guaranty, it will do *more* than pay for itself in cutting a single harvest. Any person can make the calculation for himself. As *improved*, one man to rake, and a boy to drive the horses, will attend the Machine, instead of two full hands as before, and from two to three acres more in a day may be cut by the improved Raker than with the old, by means of the greater ease with which it is done, which makes a great difference in a single harvest of any extent—say $25 or $30.

The Reaper is warranted to cut from 15 to 20 acres a day—to save an average of a bushel of wheat to the acre that would be lost by ordinary cradling, to be durable and not liable to get out of order, and the raking as stated above. Price $100, payable on delivery at Brockport, Monroe Co., New York; or time will be given for good paper drawing interest.

The undersigned, Patentee of the Machine, has contracted with Messrs. Backus, Fitch, & Co., of this place, experienced, well known, and established manufacturers, for the making of a large numb.r of Reapers for the ensuing harvest, to whom orders may be directed. Many orders have been already received from the west, as well as from the surrounding country; therefore any persons desious of obtaining machines would do well to make early application, as we do not expect to be able to supply all demands.

C. H. McCORMICK.

[*From the Mount Morris (N. Y.) Spectator.*]

Mr. Harding—*Dear Sir*: Having made a trial of Mr. Cyrus H. McCormick's Reaping Machine, for Cutting Grain, I take pleasure in making a public statement of it, agreeably to his wishes. Mr. McCormick, the inventor, introduced his machine here from Virginia. He did not arrive with it until the season for cutting Wheat had nearly passed—and consequently cut only about thirty acres for me. The ground was level, being on the Genesee Flats, though the surface was somewhat uneven, as it was a piece turned over last fall, when put into wheat, with a very heavy turf, and many of the sods still remaining on the top of the ground. But they seemed to form no impediment to its succesful operation. The machine cut one piece of twenty-five acres in a little less than a day and a half; averaging about two acres per hour for the time it was in operation. The wheat cut, if well filled, would yield about thirty bushels to the acre. The grain was cut cleaner and more even than could have been cut with the cradle or sickle. It is drawn by two horses with ease, and is attended by a man to rake, and a boy to ride and drive. The raker rides on a seat attached to the Machine, and rakes the wheat off at the side in gavels ready for binding. The Machine is simple in its construction.—The Knife has a sickle edge, and plays horizontally; and is represented to cut one hundred acres or more without sharpening. The reel gathers the wheat for cutting, and lops it over on the table for the raker. I design to use the Machine the next season. I have no doubt it would work well on up lands, where tolerably free from stumps and large stones.

A number of persons who were present and witnessed its operation, uniformly, I believe, expressed much satisfaction.

An incident occurred which may not be out of place to mention. Two Cradlers, hearing that a Machine was in the lot for cutting Wheat, never having seen one, and believing that they could cut faster and better than any live Machine, started, with Cradles in hand, with the determination (to use their own words) of "skunking it." As they reached the fence, in sight of the Machine, and saw the rapid pace with which it moved, they hid their cradles in the crook of the fence, and sloped off.

Yours, &c., SAMUEL J. MILLS.

Mt. Morris, Aug. 15, 1845.

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The undersigned deem it necessary to add but little to the foregoing account of the celebrated "Virginia Reaper," as given by the inventor. After witnessing its operation, and that to the satisfaction, we believe, of a large number of farmers who were present, we were induced to purchase the exclusive right to supply the counties of Monroe and Orleans. We were, and still are, satisfied that it must almost entirely supercede all other methods of harvesting on all lands suited to its operation, which (it will be observed from cirtificates) are neither required to be *level* or *smooth*, though it is of course desirable to prepare lands as well as may be for its operation. It is also adapted to small, as well as large farmers, as two, three, or more can unite in the purchase of a machine, according to the extent of their harvest, or the size of their farms.

As has been stated by Mr. McCormick, we have contracted with him to manufacture a large number of his Reapers, which will be furnished on the terms above mentioned, and for which orders will be thankfully received, and promptly and faithfully attended to.

BACKUS, FITCH, & CO.,
Brockport, Monroe County, N. Y.

ROCHESTER (N. Y.) NURSERY.

Fruit and Ornamental Trees and Shrubs.

The subscriber offers for sale a choice collection of Fruit and Ornamental Trees, and Hardy Shrubs, which have been cultivated with great care, and are of suitable size for transplanting this spring. Persons wishing a succession of fruit, and not being familiar with the necessary varieties, by leaving the selection to the subscriber may depend upon receiving the most desirable assortment. In every such selection, quality, and not the size of the trees, will be the rule adopted.

☞ For particulars see Catalogue, which may be had by application. Orders from a distance will be carefully packed and shipped according to directions. Nursery, East North-st., 3 miles North of Rochester. Office 36 Front-st.

April, 1846. SAMUEL MOULSON.

CHOICE FRUIT TREES.

For Sale, at the *Rochester Commercial Nursery*, on Main street, one mile east of the Court House. The subscribers offer for sale nearly 200,000 Fruit Trees of various varieties and sizes, for cash or credit, upon the most favorable terms.

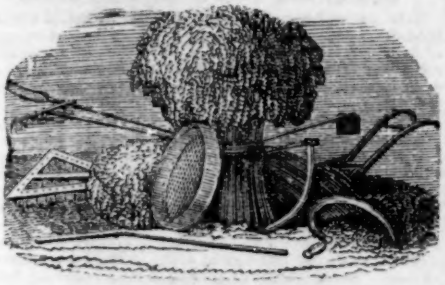
Also—An assortment of hardy Ornamental Trees and Shrubs.

Also—Scions of almost every description of Fruit. The above have been thoroughly tested, and will be warranted of the kinds represented.

BISSELL & HOOKER, at the Nursery, or
J. W. Bissell, No. 1, Arcade Hall.

March 1, 1846. 2m.

Wanted, at the Genesee Seed Store, 500 bushels Timothy and Clover Seed, for which the highest cash price will be paid by the subscribers. RAPALJE & BRIGGS.



ROCHESTER SEED STORE,
AND
WARE-HOUSE FOR FARMING TOOLS.

By JAMES P. FOGG.

The subscriber having purchased the interest of Mr. B. F. Smith, in the SEED and IMPLEMENT business, will continue the business as heretofore at the Rochester Seed Store on Front street, nearly opposite the market.

The subscriber is well aware of the important relation which the seedsman holds to the whole farming community, and that on his honor and veracity the crop and profit of a season in some measure depend. The greatest care has been used in selecting the seeds offered at this establishment for the ensuing year, and they can be relied upon as pure and genuine, carefully selected and raised from the very best varieties, and properly cured. Many kinds were raised in the immediate vicinity of this city, by Mr. C. F. Crosman, and under the inspection of the proprietor; others were raised by experienced seed growers; while those varities of foreign growth, which experience has shown are the best, such as Cabbage, Cauliflowers, Brocoli all the varieties of Garden and Field Teurnip, Scarlet Short-Top Raddish, Scarlet and White Turnip-Raddish, Dwarf and Early Peas, with Twenty choice varieties of FLOWER SEEDS, have been imported by the subscriber from the long established house of R. WRENCH & SONS, of London.

AGENTS for the sale of Rochester Seeds by the package, &c.—*Attica*, H. D. Gladding. *Amsterdam*, J. W. Sturtevant. *Auburn*, Hudson & Buckbee. *Albion*, Charles W. Perkins. *Batavia*, Lucas Seaver. *Ballston*, E. W. Lee. *Buffalo*, W. & G. Bryant. *Brockport*, A. B. Bennet. *Canandaigua*, L. C. Cheney & Co. *Cazenovia*, Dr. A. Ford. *Castile*, Halsted & May. *Dansville*, H. B. Williams & Son. *Elmira*, Tracy Beadle. *Geneva*, Hemiup & Cone. *Geneseo*, L. Turner. *Hudson*, W. & G. Storrs. *Homer*, Wm. Sherman & Son. *Ithica*, Lewis H. Culver. *Lockport*, S. H. Marks & Co. *Le Roy*, Tompkins & Morgan. *Lansingburgh*, R. Harrison. *Mumford*, J. Phelps & Co. *Mount Morris*, R. Sleeper. *Oswego*, C. & E. Canfield. *Perry*, R. H. Smith. *Penn Yan*, John H. Lapham. *Palmyra*, Hoyt & May. *Port Byron*, S. K. Kendriks. *Scottsville*, Garbutt & Co. *Schenectady*, D. L. Powell. *Syracuse*, Foster & Nott. *Seneca Falls*, C. L. Hoskins. *Troy*, J. Baggett & Co. *Utica*, J. E. Warner & Co. *Union Springs*, Wm. Cozzens. *Warsaw*, Dr. A. Frank. *Waterford*, Wm. A. Waldron. *Waterloo*, T. M'Clintock. *Wyoming*, Cornwell & Maine. *Pittsfield, Mass.* Isaac L. Cole. *York*, James M'Phearson. *Adrian, Mich.* D. K. Underwood. *Brantford, C. W.* J. & R. Curtis. *Chicago, Ill.* N. Sherman, Jr. *Columbus, Ohio*, John Miller. *Detroit, Mich.* J. W. Strong, Jr. *Hamilton, C. W.* S. Kerr & Co. *Jonesville, Mich.* Smith & George. *Kingston, C. W.* Charles Heath. *London, C. W.* Edward Adams. *Monroe, Mich.* Hosmer Graham. *Marshall, Mich.* A Callender. *Milwaukie, W. T.* Holton & Goodall—Jackson & Jewell. *Niagara, C. W.* James Harvey. *Pontiac, Mich.* Rogers & Dunklee. *St. Catharines, C. W.* S. L. St. Johns—Boomer, Brothers & Co. *Springfield, Mass.* Chapin & Gunn—Benj. K. Bliss. *Sandusky City, Ohio*, W. T. & A. K. West. *Toronto, C. W.* Robert Love. *Toledo, Ohio*, Raymond & Co. *Westfield, Mass.* Jessup & Co. *Ypsilanti, Mich.* Edmunds & Co.

Rochester, N. Y. JAMES P. FOGG.

NEW SEED and IMPLEMENT WAREHOUSE.

GENESEE SEED STORE & AGRICULTURAL WAREHOUSE,

No. 10, Front-Street, Rochester, N. Y.

THE SUBSCRIBERS respectfully announce to the public, that they have opened the above establishment for the sale of GARDEN, FIELD, and FLOWER SEEDS, of all sorts—*Agricultural and Horticultural Implements, Machines, &c. &c.*

They intend to have always on hand, a complete assortment of all the articles wanted in this line by the Farmer and Gardener. No pains will be spared to procure articles of the best quality. No seeds will be offered but such as are undoubtedly fresh and genuine—raised in the best establishments of this and foreign countries. The implements will embrace all the newest and most approved kinds, from the best manufacturers in the country.

Fruit and Ornamental Trees, Shrubs, Plants, &c., will be furnished to order from one of the best establishments in the country—the well known MOUNT HOPE NURSERIES.

The principal conductor of this establishment has had many years *practical experience* in the business, in Rochester; and being well known to a large portion of the agriculturalists of Western New York, the undersigned hope, by devoting constant and careful attention to the management of their business, to merit and receive a liberal share of patronage. Farmers and others interested, are requested to call at the GENESEE SEED STORE.

RAPALJE & BRIGGS.

Rochester, Feb. 1, 1846.

FARMERS, CURE YOUR HORSES!

GEO. W. MERCHANT'S CELEBRATED

GARGLING OIL.

AN Invaluable Remedy for Horses, Cattle and other domestic animals, in the cure of the following diseases:

Fresh Wounds,	*Fistula, Sitfast,*
Galls of all kinds,	*Strains, Lameness,*
Sprains, Bruises,	*Sand Cracks,*
Cracked Heels,	*Foundered Feet,*
Ringbone, Windgalls,	*Scratches or Grease,*
Poll Evil, Callus,	*Mange,*
Spavins, Sweeney,	*Horn Distempar.*

Also a valuable Embrocation for diseases of the Human Flesh.

Since the virtues of the Gargling Oil have become so extensively and favorably known to the farmers of the United States and Canada, as a curative oil in diseases of animals, and as a consequence, its demand becoming great—there has not been wanting those whose cupidity has suggested to them that if they could CONCOCT something as nearly resembling in appearance as they could GUESS, with any hing for a name, they might urge it upon unsuspecting customers as a substitute for the true Gargling Oil. The proprietor would therefore CAUTION those who purchase to be sure the name of G. W. Merchant is blown on the side of the bottle. All others are an ATTEMPT at imitation, and are therefore an imposition.

For testimonials, synopsis of diseases, and mode of treatment, see pamphlet which accompanies each bottle.

☞ Sold at the ROCHESTER SEED STORE, and by Druggists and Store-keepers in the United States and Canada.

Straw Cutters, *of all the most approved kinds,* used in Western N. Y., for sale cheap, by

RAPALJE & BRIGGS,
No. 10, Front-st.

MARKET INTELLIGENCE.

Rochester Produce Market.

(CORRECTED FOR THE GENESEE FARMER.)

Wheat,	1,00	*a* 1,03	Pork, bbl,		12,00
Corn,	44	46	Pork, cwt,	4,00	4,50
Barley,	44	50	Beef, cwt,	3,00	4,00
Oats,	32	34	Lard, lb,	7	8
Flour,	5,25		Butter, lb,	10	12
Beans,		88	Cheese, lb,	8	8½
Apples,	25	50	Eggs, doz,	9	
Potatoes,	25	31	Poultry,	7	
Clover Seed,	5,00	5,25	Tallow,	6	7
Timothy,	2,00	2,50	Maple Sugar,		8
Hay, ton,	10,00	12,00	Sheep Skins, fresh,		1,00
Wood, cord,	2,00	2,50	Green Hides, lb	3	7
Salt, bbl,		1,25	Dry "	6	7
Hams, lb,	7		Calf Skins,	5	6

Rochester, April 15, 1846.

NEW YORK, April 15.

Flour is steady at $5,37½ *a* $5,43—without sales for shipment. A sale of 2,600 bush. N. O. Corn sold at 67½ cts.—Sales 40,000 bush. Clover at 7¼ cts. for export. Provisions are quiet at previous prices. A sale of 50 bbls. Tallow was made at 7¾ prime. 218 bbls. beef Hams brought $8,50.

BOSTON, April 13.

PROVISIONS.—There is more inquiry. Sales of 400 bbls. prime pork at $10, 4 mos.; 300 do. mess, supposed at $11,25, cash; Boston No. 1 Beef, $7, cash; New York prime, 5,87½, cash.

FLOUR.—The market is dull and in some instances prices have declined. Moderate sales of Genesee, common brands, at $5,50 *a* 5,62½; fancy brands, 5,87½ *a* 5,94; Fredericksburg, $5 *a* 5,06¼; Howard street, 5,12½.

CORN.—Sales of yellow flat at 70 cts.; white 68 *a* 69 cts.

BUFFALO, April 14.

There is rather more firmness in flour to-day than there has been before for a few days. Holders generally are asking $4,50, and for finer brands $4,56, but we hear of no sales except for city trade to a limited extent at $4,56 for common brands, and $4,75 for a little extra.

A cargo of Indian Corn, 2300 bush, was sold afloat at 43 cents.

There is not much doing in Pork, as yet very little having arrived from the west. We hear of a sale of 50 bbls. Mess at $10,75, and 12 bbls. at $11, in three lots. In Prime there is nothing doing; we quote at $8. 20 bbls. short Shoulders sold at $6,50.

Butter is dull and sells from 8 to 10 cts.; a few kegs sold at 8 cts.

In Beef there is not much doing; we quote Mess at $6,50, and prime at $4. Lard sells to city trade 7 cts., and Dried Apples $1,25 per bush.

Cloverseed is sick; nominally held at $5. Grass-seed $1,75.—*Express.*

CINCINNATI, April 10.

FLOUR.—Sales from wagon at $3,65; 50 bbls. from store 3,60; 200 do. from canal 3,65.

BACON.—Hams 6 *a* 6¼ cts.; city packed sides 5 cts.; shoulders 3¾ cts.

BEEF.—A sale of 24 bbls. mess at $6; 30 do. prime at $4.

BUTTER.—A sale of 1,000 lbs. sold at 6 cts.—*Chron.*

To Postmasters, Agents, &c.

POST MASTERS and others who have interested themselves in obtaining and forwarding subscriptions for the FARMER, will please accept our sincere thanks for so generous an exercise of their influence. We trust they are disposed to continue their valuable aid in behalf of this publication—by extending its circulation, and thus enhancing its usefulness in their respective vicinities. Those interested will oblige us by complying with the subjoind requests:

Remittances by Mail.—Persons ordering the Farmer, are requested to enclose the money, instead of sending Post-office drafts. This will save us much trouble. If money is properly enclosed, we will run the risk of loss by mail.

Post Office Address.—Subscribers wishing to have their paper changed from one Post-office to another, will please state where *it is now sent*, in order that we may make the proper correction. It is no easy task to look over several large books to find and erase the name of a subscriber.

Western New York Agricultural School.

THE undersigned, in connection with Gen. RAWSON HARMON, of Wheatland, Monroe Co., will open on the 1st of May next, at the residence of the latter, an **Agricultural School**, designed to teach in the most thorough and systematic manner, both the Practice and the Science of Rural Economy, in all their various branches.

The Farm is large and under a high state of cultivation, yielding annually some 1400 bushels of wheat, sold at extra price for seed, which is eagerly sought after in all the wheat growing districts of the Union. Gen. HARMON is a working practical farmer, and will devote his personal attention to the instruction of all pupils attending the School. There are now growing on the premises over fifty distinct varieties of Winter Wheat. The undersigned will have a *Chemical Laboratory* for the analysis of soils, plants, and animal substances; and no pains will be spared to make the School the most practical and useful of any in the State. Able Assistants, both in Literature and Science, will be employed, so soon as buildings can be erected to accommodate a large number of students.

TERMS—Twenty-five Dollars a Quarter, or $100 a Year—including board, washing, tuition, &c.

April, 1846. DANIEL LEE, M. D.

The Genesee Farmer.

VOLUME VII, FOR 1846.

Each Number of this Volume, (which commened in January, 1846,) *instead of* SIXTEEN, *contains* TWENTY-FOUR LARGE OCTAVO PAGES,—*is printed on* NEW TYPE, *and* GOOD PAPER,—*and embellished with appropriate* ENGRAVINGS. The paper will make a handsome volume of about *three hundred pages*, suitable for binding at the expiration of the year. No reasonable expense or effort will be spared, but every proper exertion used to make it acceptable to the Farming community, by rendering it at once the *cheapest* and *best* paper of its *size* and *kind* in the Union.

ITS EDITORIAL DEPARTMENT will continue under the supervision of DR. DANIEL LEE, its present talented and popular Editor. Its HORTICULTURAL DEPARTMENT will be conducted by P. BARRY, Esq, an experienced and practical Horticulturist.

TERMS, same as heretofore—FIFTY CENTS A YEAR, *in advance*; 5 copies for $2; 8 copies for $3.

Now is the time to subscribe! and those who wish to do so, are requested to send in their orders as soon as convenient. Persons ordering the paper will please write plainly the name of the Post Office, County and State to which it is to be sent—and also state whether they have the January number. Post Masters, and other friends of Agricultural Journals, are requested to obtain and forward subscriptions for the Farmer. Post Masters may enclose money at our risk. Address D. D. T. MOORE,
Rochester, N. Y.

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